

Contents on Colored Page IX.

VOL. XXXVI.

NUMBER 3.

March, 1879.

THE

SAINT LOUIS.

Medical and Surgical
JOURNAL.

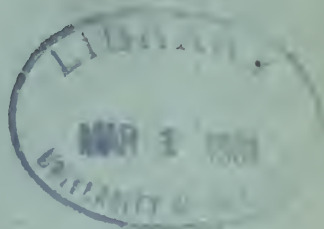
[ESTABLISHED 1843.]

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SAINT LOUIS:
GEO. O. RUMBOLD & CO.,
1879.

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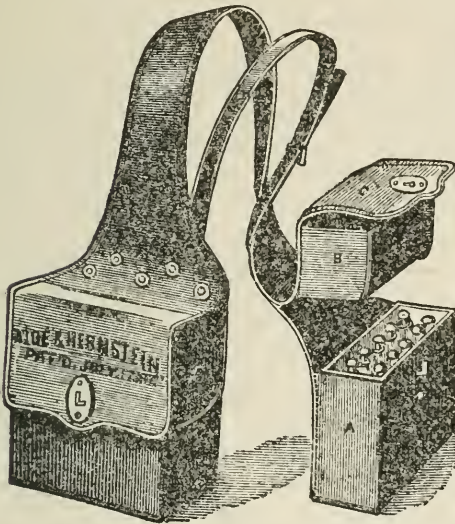
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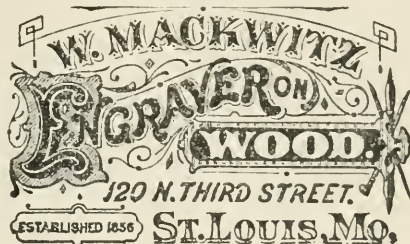
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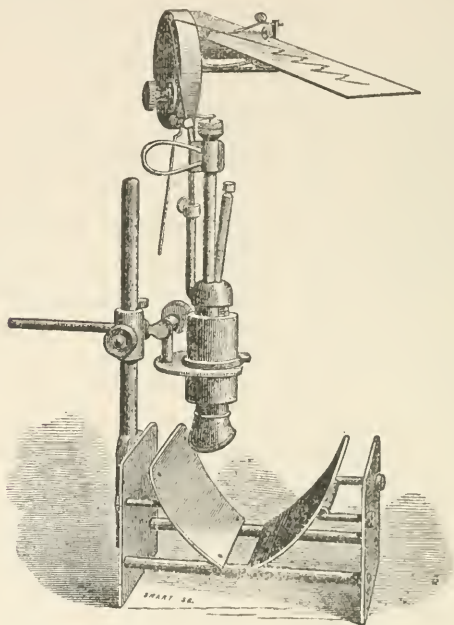
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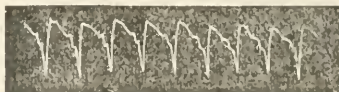
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CONTENTS.

ORIGINAL CONTRIBUTIONS.

ARTICLE.	PAGE.
XIII. The Medical Profession. Annual Address to the St. Louis Medical Society, January, 1875. By Thos. Kennard, M. D.....	163
XIV. Observations and Experiments with the Agents Employed in Anæsthetic Mixtures. By Laurence Turnbull, M. D., of Philadelphia, Aural Surgeon at Jefferson Medical College Hospital.....	178
XV. On Prevention of Puerperal Fever in Private Practice. By Carl Walliser, M. D., of Highland, Ill	184
XVI. Whooping Cough; A Neuroses, Pathology and Treatment. By J. J. Caldwell, M. D., of Baltimore, Md.....	192

REPORTS ON THE RECENT PROGRESS OF MEDICINE

XVII. The Spirit of the European Medical Press. By A. C. Bernays, A. M., M.D., Heidelberg; M. R. C. S., Eng.; Member of the German Society of Surgeons, Berlin, etc	197
---	-----

TRANSLATIONS FROM THE GERMAN

Physiology and Therapeutics in Ophthalmology. [Taken from Prof. A. Nagel's <i>Jahresbericht ueber die Fortschritte und Leistunge im Gebiete der Ophthalmologie</i> .] By S. Pollak, M. D., Surgeon of the Eye and Ear Infirmary of the St. Louis Hospital.....	202
Glaucoma—Continued. Excerpts from a Lecture by L. Wecker. [Translated from <i>Klinische Monatsblätter für Augenheilkunde</i> . By Wm. Dicklason, M. D., of St. Louis.....	206

CLINICAL REPORTS FROM PRIVATE PRACTICE.

A Penetrating Wound of the Brain made by a Pocket Knife. By A. T. Bartlett, M. D., of Virden, Ill.	211
---	-----

Case of Syphilitic Ulceration of the Thyroid Cartilages, Resulting in Death. By Drs. Bartlett and Dreyfus, of Louisiana, Mo.....	213
---	-----

REPORTS FROM HOSPITAL PRACTICE.

Cases of Ulcers Treated by Dr. Martin's "Strong Elastic Baudage." By F. J. Lutz, M. D., Surgeon to the Alexian Brother's Hospital.....	215
---	-----

PROCEEDINGS OF MEDICAL SOCIETIES.

Lewis County Medical Society.....	217
South-Eastern Kansas District Medical Society.....	219
Audrain County Medical Society.....	220

PERISCOPE OF CURRENT MEDICAL AND SCIENTIFIC LITERATURE.

Practice of Medicine.....	221
Surgery.....	223
Obstetrics.....	224
Gynaecology.....	225
Therapeutics.....	235
Diseases of the Nervous System.....	236
Physiology.....	242
Veneral Diseases.....	245
EDITORIAL.....	247
BOOK NOTICES AND REVIEWS.....	253
MORTALITY REPORT.—City of St. Louis.....	257
METEOROLOGICAL OBSERVATIONS.....	257
MORTALITY RATES OF THE LARGEST CITIES.....	258

THE ST. LOUIS MEDICAL SOCIETY DEPARTMENT.

Officers and Standing Committees.....	2
Hygienic Management and Prophylaxis of Yellow Fever. N.....	3
Remarkable Case of Injury of the Spine. Reported by Adolphus Green.....	5
Discussion of Yellow Fever.....	11

TRI-STATE MEDICAL SOCIETY DEPARTMENT.

The Principles and Practice of Modern Lithotripsy and the Recent Issues by which they are Imperilled. By Reuben A. Vance, M. D., of Gallipolis, Ohio.....	21
Discussion.....	31

 The EDITORS hold themselves responsible for the Character of the Contributions, but not for the Opinions expressed in them.

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The claim of the immense superiority of animal and vegetable phosphates is sustained by some of the highest authorities in the world:

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M. Andre Sanson, in a paper read at the Academy of Medicine (*Gazette Medicale*, August 14, 1869) said, "That to promote osseous growth, the administration of Phosphate of Lime either in the shape of Hypophosphites (laboratory kind), or in that of powdered bone is unavailing. Several attempts made with these substances have never been successful. *It was because their form does not allow of their assimilation. On the contrary organic phosphates, such as are elaborated in vegetables, are real aliments.*"

Dr. Routh, of London, says: "In morbid conditions, resulting from deficient amount of phosphorus in the human system, a large experience, and an extensive field of observations has proved that it is perfectly useless to attempt their removal by phosphorous compounds, manufactured in the laboratory. The re-supply must be furnished by food, rich in these compounds, as wheat bran, egg, fish, and shell fish."

Dr. George Templini says: "Nervous exhaustion, whether manifest in the functions of the cerebrum, cerebellum, or spinal cord is always attended with a deficiency of phosphorus. This deficiency can alone be restored by phosphorus, assimilated from the food."

Dr. Samuel R. Percy, in his Essay "Phosphorus," speaking of the nitrogenous hypophosphite, which is the Hypophosphite element of this preparation, says on page 65, *Transactions of the American Medical Association*, 1872: "Although this Nitrogenous Hypophosphite has been isolated from brain and nerves; it has, we believe, never yet been formed in the laboratory, nor has it been used as a therapeutical agent."

Upon hypothetical grounds alone, we should suppose it to be one of the most assimilable of all the preparations of phosphorus, because it most nearly resembles that form of phosphorus which is found to be the most active in the animal economy."

It will be noticed that Dr. Percy merely "supposed on hypothetical grounds alone" what Templini, Sanson, Fox, Routh and Polk had previously stated, and squarely admits he had not used such compounds as a therapeutical agent. Moreover his statement that he has ever published in any Essay, Paper, Circular, Book or Pamphlet a working formula for such a preparation is without the slightest shadow of a truth.

COMPOSITION OF A HUNDRED PARTS:

Isolated Nitrogenous Hypophosphite of Calcium.....	8 parts
" " " Sodium.....	6 "
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" " " Iron.....	4 "
Glycero-Nitrogenous Hypophosphite.....	15 "
Free Hypophosphorous Acid.....	3 "
Bower's Pure Glycerine.....	50 "

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TO THE MEDICAL PROFESSION

I take pleasure in announcing that having perfected arrangements for procuring a supply of Cinchona Bark from the East Indies of the Celebrated NEILGHERRY HILLS growth (hitherto unattainable in this country), I offer for your consideration a

COMPOUND TINCTURE OF NEILGHERRY BARK.

It is a well-known fact, proven by analysis and clinical use, that the bark grown on the Neilgherry Hills is much richer in the more useful alkaloids than that obtained from any other source. It is also shown conclusively by numerous trials to possess greater febrifuge properties, and that these Alkaloids when used in their natural combinations will not produce Quinism, or any of the disagreeable sensations almost sure to follow the use of the artificial salts, as Sulphates, Muriates, etc.

In the preparation of this tincture an extract is first made and purified from all extractive and coloring matters, carefully assayed, and the tincture formed from this containing at all times the definite quantity of ten grains of the combined alkaloids in each fluid ounce, each alkaloid being in the same proportion as originally found in the bark. The vehicle is slightly aromatic and contains a small quantity of Alcohol and Sugar. Although quite bitter the taste is not unpleasant, and in the very large number of cases in which it has been used during the past season, it has proven vastly superior to Quinia in all cases of Intermittents and other diseases having their origin in Malaria, both in the more certain and rapid cure of the disease and in its after effects upon the system. As a tonic in debility, given in small doses, it is more efficacious than any preparation heretofore devised, being less liable to offend the stomach or to irritate the bowels.

The Tincture is put up in six ounce and twelve ounce bottles, labeled simply "*Compound Tincture of Neilgherry Bark, prepared by J. C. Richardson,*" the dose and mode of administration being left to the Physician.

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TO THE MEDICAL PROFESSION.

MALTINE

EXTRACT OF MALTED BARLEY, WHEAT AND OATS.

THIS PREPARATION

Contains from three to five times the Medicinal
and Nutritive elements found in the Extract of Malt.

MALTINE is a highly concentrated extract of malted *Barley, Wheat and Oats*, containing, undiminished and unimpaired, all the medicinal and nutritious principles found in these cereals. By the most carefully conducted scientific process we are enabled to offer to the medical profession a perfect article, possessing from *three to five times* the therapeutic and nutritive merit of any foreign or domestic Extract of Malt.

In support of our claims we invite the attention of the profession to the following points, viz.:

FIRST: In the manufacture of MALTINE the evaporation necessary to reduce it to its great density is conducted in vacuo, at a temperature ranging from 100° to 120° Fahr.; while most manufacturers of Extract of Malt resort to "open pan" or low pressure steam boiling, by neither of which processes can the extract be so produced as to preserve the Diastase, Phosphates and Albuminoids on which its remedial value so greatly depends, and the product is either of a dark color or of low specific gravity, possessing little virtue aside from the saccharine matter which it contains.*

SECOND: *Carbon, Hydrogen, Nitrogen, Phosphorus, Sulphur, Iron, Magnesium and Potassium* are essential elements in the food of man, and it is only in MALTINE, containing the combined properties of malted *Barley, Wheat and Oats* that all these principles can be found in the proper proportions; Extract of Malt made from *Barley alone* is wanting in some of the most important of these elements.

THIRD: *Gluten* is the most nutritious principle found in the cereals, and is the only vegetable substance which will, alone, support life for any great length of time. It is composed of three distinct nitrogenous principles, together with fatty and inorganic matters, and is analogous to animal fibrin. MALTINE contains twenty times the quantity of *Gluten* found in any Extract of Malt.

FOURTH: LIEBIG says "Wheat and Oats stand first among our list of cereals in combining all the elements in proportion necessary to support animal life. They are especially rich in muscular and fat producing elements." The only reason we use Malted Barley in the manufacture of MALTINE is that it contains larger proportions of mineral matter (bone producers.) and Diastase. It is deficient in all other essential elements.

We believe that any practitioner will readily recognize the superiority of MALTINE, and request a trial and comparison of merits with any article offered for similar uses.

* As a sure test for Diastase, and the Albuminoids a small quantity should be put in a test tube or small vial, largely diluted with Water, and heated to the boiling point, when the Albumen, if present, will coagulate, and appear in little flocculent particles throughout the liquid. If the extract remains clear, it is proof that it had already been coagulated by excessive heat, and removed by filtration during the process of manufacturing. Any heat which will coagulate Albumen will inevitably destroy the digestive power of Diastase.

The Nitrogenous constituents of MALTINE have a composition identical with that of the chief constituents of the Blood, and therefore contain nearly every element requisite for the reproduction of the human body.

MALTINE AND ITS COMPOUNDS

can undoubtedly be used with greater success than any other remedy now known, in cases of general and nervous Debility, Indigestion, imperfect Nutrition and deficient Lactation; Pulmonary affections, such as Phthisis, Coughs, Colds, Hoarseness, Irritation of the Mucous Membrane and difficult expectoration; Cholera Infantum and wasting diseases of children and adults; Convalescence from Fevers, and whenever it is necessary to increase the vital forces and build up the system.

WE MANUFACTURE THE FOLLOWING PREPARATIONS, THE FORMULAS AND DOSES OF WHICH ARE GIVEN IN OUR DOSE BOOKS AND ON THE LABEL ATTACHED TO EACH BOTTLE.

MALTINE With Hops.

MALTINE, Ferrated:

This combination is specially indicated in Aemia and Chlorosis, and in all cases of defective nutrition where Iron is deficient in the system.

MALTINE With Phosphates Iron and Quinia:

A powerful general and nutritive tonic.

MALTINE With Phos. Iron, Quinia and Strychnia:

A powerful nutritive, general and nervous tonic.

MALTINE With Pepsin and Pancreatine.

One of the most effective combinations in Dyspepsia, Cholera Infantum and all diseases resulting from imperfect nutrition. It contains three of the all-important digestive agents, Diastase being one of the constituents of the MALTINE. We believe there are few cases of Dyspepsia which will not readily yield to the medicinal properties of the above combination, while the system is invigorated by its nutritive qualities.

MALTINE With Beef and Iron:

One of the most valuable combinations in case of general Debility, where there is deficient nutrition and a deficiency of Iron in the system.

MALTINE With Alteratives:

In this preparation MALTINE is combined with the most valuable Alteratives known, such as Iodides, Bromides and Chlorides, and will fully meet the requirements of the practitioners in Syphilis, Scrofula and all depraved conditions of the blood.

MALTINE WINE.

This preparation contains all the medicinal and nutritive constituents of MALTINE, less 60 per cent. of the transformed starch or glucose, which renders the preparation lighter and more acceptable to some stomachs, and is recommended only in such cases.

MALTINE WINE With Pepsin and Pancreatine:

(Each fluid ounce of MALTINE WINE contains 15 grains pure PEPSIN and 15 grains pure PANCREATINE.)

We can recommend this preparation to the Medical Profession as being the most important remedy ever brought to their notice in all cases of Dyspepsia and imperfect Nutrition, when the system needs invigorating and replenishing. It will be found, we believe, a perfect remedy in Vomiting in Pregnancy, Cholera Infantum and wasting diseases of children, and in Constipation and Chronic Diarrhoea resulting from mal-nutrition. It will agree with the most irritable stomach.

MALTO-YERBINE.

(Each pint of the above preparation contains 13 ounces of MALTINE, 2 ounces CARRAGEEN and 1 ounce of YERBINE.)

With the nutritive, emollient, and demulcent properties of MALTINE and CARRAGEEN, and the expectorant qualities of YERBINE, (active principle of Yerba Santa,) we offer this preparation with the fullest confidence that it is the most perfect remedy yet produced in Chronic Pulmonary Affections, Irritation of the Mucous Membrane, Difficult Expectoration, Bronchitis, and ordinary Coughs and Colds.

The Dose of all preparations of MALTINE and compounds is from a dessert to a tablespoonful.

We also manufacture a perfectly prepared EXTRACT OF MALT, from Barley only. MALTINE preparations are sold at the same price as EXTRACT OF MALT and its combinations, and are put up in half-pint, pint and five pint amber bottles; each bottle inclosed in a folding paper box.

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WYETH'S DIALYSED IRON.

(FERRUM DIALYSATUM.)

A Pure Neutral Solution of Oxide of Iron in the Colloid Form. The Result of Edosmosis and Diffusion with Distilled Water

PREPARED SOLELY BY

**JOHN WYETH & BRO.,
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This article possesses great advantages over every other ferruginous preparation heretofore introduced, as it is a solution of Iron in as nearly as possible the form in which it exists in the blood. It is a preparation of invariable strength and purity, obtained by a process of dialysation, the Iron being separated from its combinations by endosmosis, according to the law of diffusion of liquids. It has no styptic taste, does not blacken the teeth, disturb the stomach, or constipate the bowels.

It affords, therefore, the very best mode of administering

IRON

in cases where the use of this remedy is indicated.

The advantages claimed for this form of Iron are due to the absence of free acid, which is dependent upon the perfect dialysation of the solution. The samples of German and French Liquor, Ferri Oxidi Dialys., which we have examined, give acid reaction to test paper. If the dialysation is continued sufficiently long, it should be tasteless and neutral.

Our Dialysed Iron is not a saline compound, and is easily distinguished from Salts of Iron, by not giving rise to a blood-red color on the addition of an Alkaline Sulpho-Cyanide, or a blue precipitate with Ferro-Cyanide of Potassium. It does not become cloudy when boiled. When agitated with one part of Alcohol and two parts of Ether (fortior) the Ether layer is not made yellow.

Physicians and Apothecaries will appreciate how important is the fact that, as an antidote for Poisoning by Arsenic, Dialysed Iron is quite as efficient as the Hydrated Sesquioxide (hitherto the best remedy known in such cases) and has the great advantage of being always ready for immediate use. It will now doubtless be found in every drug store, to supply such an emergency.

Full directions accompany each bottle.

Physicians will find our **Dialysed Iron** in all the leading Drug Stores in the United States and Canada.

It is put up in bottles retailing for **One Dollar**, containing sufficient for two months' treatment. Large size is intended for hospitals and dispensing. Retail at \$1.50. Price Lists, etc., sent on application.

JOHN WYETH & BRO.

PEPTONIC PILLS.

Pepsin, Pancreatin, with Lacto-Phosphate of Lime & Lactic Acid.

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This pill will give immediate relief in many forms of Dyspepsia and Indigestion, and will prove of permanent benefit in all cases of enfeebled digestion produced from want of proper secretion of the Gastric Juice. By supplementing the action of the stomach, and rendering the food capable of assimilation, they enable the organ to recover its healthy tone, and thus permanent relief is afforded. One great advantage of the mode of preparation of these pills is the absence of sugar, which is present in all the ordinary Pepsin and Pancreatin compounds—in this form the dose is much smaller, more pleasant to take, and is less apt to offend the already weak and irritable stomach. The results of their use have been so abundantly satisfactory, that we are confident that further trial will secure for them the cordial Approval of the Medical Profession and the favor of the general public.

Each pill contains one grain of pure Pepsin, and one of pure Pancreatin, which is equivalent to 10 grains of the ordinary or saccharated usually prescribed and dispensed. Physicians will appreciate the great advantage of this mode of administration, the increased benefit to the Dyspeptic being due to a full and effective dose of each, freed from the unnecessary bulk, and really hurtful addition of sugar. A single pill will give immediate relief.

DIRECTIONS.—Take one pill immediately after eating or when suffering from Indigestion, Lump in the Throat or Flatulence. For children reduce the pill to powder and give a fourth or half, according to age.

JOHN WYETH & BRO.,

CHEMISTS, PHILADELPHIA.

Mensman's Peptonized Beef Tonic.



The great necessity for a fluid food that would possess *all the elements necessary for the support of the system* having been long felt by the Medical Profession, we call attention to this preparation, containing *the entire nutritious properties* of the muscular fibre, blood, bone, and brain of a healthy bullock, dissolved by aid of heat and pepsin, and preserved by spirit; thus constituting a perfect nutritive, reconstructive tonic.

It is not a mere stimulant, like the now fashionable extracts of beef, but contains blood-making, force-generating, and life-sustaining properties, pre-eminently calculated to support the system under the exhausting and wasting process of fevers and other acute diseases, and to rebuild and recruit the tissues and forces, whether lost in the destructive march of such affections, or induced by overwork, general debility, or the more tedious forms of chronic disease. It is friendly and helpful to the most delicate stomach, and where there is a fair remnant to build on, will reconstruct the most shattered and enfeebled constitution. It is entirely free from any drugs. Dispensed in 16 oz. bottles.

"DR. MENSMAN'S BEEF TONIC"

"Is a complete representative of lean and fat beef, bone, blood, and muscle. It consists of all the properties which combine in the development of the animal body, which are liquefied by an artificial process, simulating natural digestion, and retaining all of their alimentary values. It contains in their perfection all the natural elements of the meat in their natural quantitative relations, without their extraneous or indigestible properties, and therefore requiring the least possible effort on the part of the stomach for its conversion into chyle, and its immediate absorption by the system.

"This Tonic is free from any drugs or chemicals, and is a great invigorator or recuperant. I have used this preparation in several cases of sickness of a character which enables me to give the most favorable opinion of its great value, in extreme sickness. Some of the cases referred to are hemorrhage of the bowels, typhoid fever, bilious fever, inflammation of the bowels, where the greatest possible prostration was present, and in which I found this meat tonic to accomplish results I could not obtain with any other preparation. It is a gentle stimulant, and allays the peculiar irritation of the stomach, which destroys the appetite in all forms of disease, when the tone of the stomach is destroyed."

"We published the above article in the November Number of 1877, and will say that we have prescribed the tonic daily to date with the very best results.—ED. MED. ECLECTIC."

THE BEST THREE TONICS OF THE PHARMACOPŒIA:

Iron, Phosphorous, and Calisaya.

We call the attention of the Profession to our preparation of the above estimable Tonics, as combined in our elegant and palatable **Ferro-Phosphorated Elixir of Calisaya Bark**, a combination of the Pyrophosphate of Iron and Calisaya never before attained, in which the nauseous inkiness of the Iron and astringency of the Calisaya are overcome, without any injury to their active tonic principles, and blended into a beautiful amber colored Cordial, delicious to the taste and acceptable to the most delicate stomach. This preparation is made directly from the **ROYAL CALISAYA BARK**, not from **ITS ALKALOIDS OR THEIR SALTS**—being unlike other preparations called "Elixir of Calisaya and Iron," which are simply an **Elixir of Quinine and Iron**. Our Elixir can be depended upon as being a true Elixir of Calisaya Bark with Iron. Each dessertspoonful contains seven and a half grains Royal Calisaya Bark and two grains Pyrophosphate of Iron.

PURE COD LIVER OIL,

Manufactured on the Sea-Shore from Fresh and Selected Livers.

The universal demand for Cod Liver Oil that can be depended upon as strictly pure and scientifically prepared, having been long felt by the Medical Profession, we were induced to undertake its manufacture at the Fishing Stations where the fish are brought to land every few hours, and the Livers consequently are in great perfection.

This Oil is manufactured by us on the sea-shore, with the greatest care, from fresh, healthy Livers, of the Cod only, without the aid of any chemicals, by the simplest possible process and lowest temperature by which the Oil can be separated from the cells of the Livers. It is nearly devoid of color, odor, and flavor—having a bland fish-like, and to most persons, not unpleasant taste. It is so sweet and pure that it can be retained by the stomach when other kinds fail, and patients soon become fond of it.

The secret of making good Cod Liver Oil lies in the proper application of the proper degree of heat; too much or too little will seriously injure the quality. Great attention to cleanliness is absolutely necessary to produce sweet Cod Liver Oil. The rancid Oil found in the market is the make of manufacturers who are careless about these matters.

Prof. Parker, of New York, says: "I have tried almost every other manufacturer's Oil, and give you my decided preference."

Prof. Hays, State Assayer of Massachusetts, after a full analysis of it, says: "It is the best for foreign or domestic use."

After years of experimenting, the Medical Profession of Europe and America, who have studied the effects of different Cod Liver Oils, have unanimously decided the light straw-colored Cod Liver Oil to be far superior to any of the brown Oils.

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Under the direction and personal supervision of W. F. FORD, Instrument Maker to St. Luke's Mt. Sinai, New York State Women's Hospitals, Bellevue, and all other New York Hospitals.

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Special attention given to the manufacture of Instruments to order, in exact accordance with patterns furnished by Surgeons and Physicians.

GASWELL, HAZARD & CO.,

PHOSPHOROLE.

PHOSPHORUS and COD-LIVER OIL

have now an established position throughout the civilized world as important therapeutical agents. A *perfect combination* of the two has long been a desideratum, since they are both of value in the same disorders, while the cases in which one is demanded and the other contra-indicated are exceedingly rare.

The combination in PHOSPHOROLE has the twofold advantage of furnishing *the best possible form* for the administration of *phosphorus*, and a *more effective form* for the administration of *cod-liver oil*.

With regard to the former, it has been decided by the highest chemical and medical authorities that *phosphorus* should be administered *in a free state*, and in a vehicle which ensures its *perfect diffusion*, its *absolute unalterability*, and, as far as possible, its *prompt assimilation* without the gastric irritation to which the ordinary methods of exhibiting the agent give rise. It is well known that pills, emulsions, solutions in ether, chloroform, vegetable oils and resin, etc., have all failed to fulfill one or more of these conditions. Even an ordinary solution of phosphorus in cod-liver oil would not answer the purpose in all respects. We claim, however, that PHOSPHOROLE completely satisfies all the conditions. From the method of preparing it, in an atmosphere of dry carbonic acid, the phosphorus is *entirely dissolved without oxidation*, and by our mode of manipulation a *positive uniformity of strength* is ensured. It is then promptly bottled and sealed, and its *stability and permanence* thus secured. The exact amount of phosphorus in each dose is known, its efficiency is ensured, and the irritant effects upon the stomach are reduced to a minimum by the blandness of the oil. As a means then of administering *phosphorus* in the many cases in which it is indicated as a *nervous tonic and stimulant*, it is claimed that PHOSPHOROLE is the best attainable in the present state of our knowledge.

The value of *cod-liver oil* in phthisis is so familiar to the physician that it is needless to dwell upon it. But the value of *phosphorus* is also universally recognized in this disease, especially when complicated with nervous derangements. The *combination* of the two therefore furnishes a more effective form for the administration of cod-liver oil in the great majority of cases in which that remedy is indicated, and one which will at once commend itself to the profession.

A dose of two teaspoonfuls of PHOSPHOROLE contains $\frac{1}{100}$ of a grain of phosphorus. This dose, when given after a meal, is effective, and not very liable to interfere with digestion. *Phosphorus is cumulative in its action, and should be administered with watchful care.* About $\frac{1}{12}$ grain is considered the largest safe dose, and we rarely need go higher than $\frac{1}{20}$ or $\frac{1}{30}$ of a grain. At the very first appearance of the smallest gastric derangement, the exhibition of phosphorus should be stopped.

PHOSPHOROLE is handsomely put up in pint bottles only, and may be obtained at all first-class druggists throughout the United States.

Descriptive Circulars furnished upon application.

Correspondence with Physicians solicited.

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MANUFACTURING CHEMISTS, BOSTON.

THE
SAINT LOUIS
MEDICAL AND SURGICAL
Journal.

VOL. XXXVI—MARCH, 1879—No. 3.

Original Contributions.

ARTICLE XIII.

THE MEDICAL PROFESSION. ANNUAL ADDRESS TO THE ST. LOUIS
MEDICAL SOCIETY, January, 1875. By THOS. KENNARD, M. D.

In assuming the duties of the office to which your votes have elevated me, I assure you that I do so with the greatest degree of diffidence and much embarrassment, and trusting that, however much I may disappoint you in my endeavors to properly fill the position in which you have placed me, you will not attribute the failure on my part to any lack of interest or want of proper appreciation of the duty which I owe to my professional brethren who have called me to preside over their scientific deliberations during the present year. I am sorry indeed, that the very short time intervening between the annual election of our society and the installation of its officers, precludes the possibility of one engaged in active practice preparing a scientific address that would be either interesting or instructive to the majority of our members; but on occasions like these we intend rather to enkindle anew and to express our professional sympathies than to challenge criticism or excite scientific discussions.

I shall not attempt to entertain you with an essay upon any medical topic, but devote a few moments to the consideration of the practical workings of our profession, and to point out to you how nobly but vainly we have been struggling for many years to maintain the position, power and public influence which our professional attainments justly entitle us to, and which our brethren so easily held in this country, until within the past twenty-five or thirty years.

With professions as with individuals, it is well to cease awhile from the constant struggle for existence, to take a retrospective glance, that we may see what we have accomplished, wherein we have erred, and how our experience may profit us in the future, for we must remember that times change *and men must change with them, or lose the power and influence that they have already gained.*

No one would dream of comparing the soldiers and politicians of the present day with the heroes, whose unselfish bravery, stern integrity, and manly virtues laid the foundation of this now mighty Republic, or with those noble statesmen who immortalized themselves in maintaining and extending its limits from Plymouth Rock to the Pacific Ocean. Those were men who never sacrificed principle to policy, these whom we now call our rulers never sacrifice policy to principle—but as times change they readily adapt themselves to circumstances.

We thank God that amidst the general demoralization of the age, that we as a profession have not forgotten the holy and time honored teachings of our ancestors, but as a class are as pure and honest to-day as we were hundreds of years ago. From first to last our motives have been honorable, and we have labored to benefit ourselves that we might benefit others. We have worked constantly, though silently, with a fixed determination as individual members of a liberal profession to exert a beneficial influence upon the community in which we live, and, although the unprofessional may not have realized the magnitude of the work that we have accomplished, still the improved sanitary condition our city, and the greatly decreased death rate confirms my statement. Neither the allurements of wealth nor the desire for public place and power has led many of our members astray from the pursuit of the profession of medicine and its purposes, viz: the prevention and amelioration of human suffering and misery, both mental and physical. No other

profession seems to so completely absorb the thoughts of its votaries as does ours. Most men except physicians and divines abandon their profession or business as soon as it proves unprofitable in a pecuniary sense, but how many in our ranks struggle on from day to day, and from year to year in their vain endeavors to make a reputation and an honorable living, until, driven to destruction by despair, they are dragged to the drunkard's grave, or who can tell the secret history of suffering, mortification, disappointment and hope deferred of the hundreds of young physicians who in any other calling might have met with success, or at least spared themselves a vast expenditure of money and anxiety. Yes, gentlemen, the medical profession has proven itself to be the purest, the noblest and the most trustworthy of all professions, and it stands incorruptible and uncorrupted in the midst of the seething sea of corruption which has almost swept away honesty as one of the landmarks. Thirty-nine years ago this society was organized, since which time it has been the representative medical body of St. Louis, of Missouri and most of the time, of the Mississippi Valley. From its incipency to the present moment its main object has been the advancement of medical science and the mutual improvement of the members of the profession of this city. Inspired by the noblest aims, actuated by the purest and most unselfish motives it would be strange indeed, if during more than a third of a century of conscientious action we had not accomplished much for our own good and more for the general benefit of mankind, but living in the midst of one of the most wonderfully enterprising populations in the world; a people who in this short period have changed a thriving village into the great metropolis of the richest and most productive region of the earth; who by their united efforts have made St. Louis one of the wonders of the world. We have almost lost our identity, and forgotten that, as a profession, we have taken any part in raising her to the present high position which she occupies, and yet I believe that the medical profession has kept pace with her rapid progress, and, though some of our movements have been in the wrong direction and actuated more by hopes of personal than professional advancement, none such have been advised or encouraged by the St. Louis Medical Society—or practiced with her sanction.

By our individual and combined efforts we have done much toward changing St. Louis from one of the most unhealthy to

the most healthy large city in the Union, and by our continued charitable ministrations to the sick and destitute poor, we have saved many a valuable life, and relieved our citizens from what would have been a most burdensome expense if we had been compensated pecuniarily for our services. However, we claim no credit for what we have accomplished, for medical men have always and everywhere been in advance of their age in cultivating science, opposing ignorance, combatting error and superstition, and rendering charity, and, although as a rule, our scientific labors and charitable deeds have neither been properly appreciated by those whom we have served, or been appreciated nor acknowledged by the general public, still we enjoy the privilege of knowing and feeling that we have done much for the mitigation of human suffering and the prolonging of life, and have never been known to shirk our duty in the midst of pestilence, no matter how appalling, but, with dauntless courage and sympathizing hearts have stood at our posts and endeavored to do our whole duty as medical men, without aiming at the popularity of the hour, and without compensation beyond the pleasure and satisfaction of unostentatious charity in doing good to our fellow men. We have never hesitated between duty and pleasure, between charity and pecuniary profit, but always endeavored to act the part of true physicians.

We, as a class, have courted neither the patronage of the rich nor the poor, we have neither practiced a fawning servility to the one, nor hesitated to answer the call for help from the other, no matter from what abject poverty they came, but we have remembered that humanity, mercy and all the noble sentiments of the mind and promptings of the human heart have demanded of us that we should ever be ready to answer the summons of the sick and suffering, and to allow no man to die whom we might be instrumental in saving. Believing medicine to be the noblest of all arts, we have adhered to the profession of our choice, in spite of all disappointments and discouragements, and if we have failed in becoming useful to, and being disappointed in reaching the eminence to which we have aspired among our professional brethren, we have at least had the satisfaction of knowing and feeling that we have done our duty to our fellowman; and, if perchance, some of us have been misunderstood and misrepresented, we can congratulate ourselves

with the belief and fact, that slander and malice are born of jealousy, and our own defamation comes from those small minded creatures whom we can afford to pity rather than to condescend to lower ourselves to the degraded position which they occupy, to contend or quarrel with them. The mousing bat and the hooting owl never attracts the notice of the proud eagle, who, heedless of ail below him, moves still swiftly on, cleaving the skies with the grandeur of his flight. We can easily afford to treat with contempt such pitiable defamation and press on in the race we have begun, until we gain a position which defamation cannot degrade.

Now my fellow members, having given a very hurried and imperfect sketch of the aims and motives that control *honorable medical men* in the pursuit of their profession, let us ask why it is, if my statements be true, that our earnest and unselfish endeavors have not been crowned with more success? Why have we not been able to secure for the science of medicine and its votaries, that high position to which it is entitled, in this most wonderful age of human progress? Why have not our proud achievements in the study of man brought with them the rewards and respect to which we are justly entitled. The reasons are many and palpable, if we only lay aside blind prejudice and take a calm view of our surroundings, and see how much many in our ranks have been influenced by them in spite of our time honored rules and regulations.

First, then, we have, as a class, failed to realize that the practice of medicine has a business, as well as a moral and scientific aspect, and the reason why so many practitioners fail to succeed, is because they neglect to manage their practice in a business-like manner, which is absolutely indispensable to success. The same qualifications which are requisite for a successful merchant are also demanded of a medical practitioner. Prudence, policy, perseverance, punctuality and common sense are prerequisites of success in every undertaking. We, however, whilst claiming to be possessed of an unusual share of all these traits of character, and to be more familiar with the workings of the human heart and mind than any other men, act like innocent and confiding children, and allow ourselves to be cheated out of half our living, and at the same time, to be classed as the most avaricious and exacting of all individuals. We thus not only unnecessarily lose hard-earned money, but at the same time, make enemies who

will never cease defaming us *as long as they owe us*. It is neither charity nor kindness to waste our time and brains on those who neither deserve it nor give us credit for what we do, when there are so many deserving poor around us calling for assistance every day, and when there is so much more profitable work for us to be engaged in. We should make those who demand our services *pay for them*, and restrict our charitable work to true charity.

Next, we assume a false position in our pretended dislike for appearing in the public prints. We denounce the customary methods of modest men in making use of the newspapers as a medium of communication with their fellow men, whilst we tolerate all manner of advertising from certain privileged classes. We know that the secular press, in its omnipresent and omniscient capacity, wields a powerful influence for both good and evil, and yet we fail to embrace the advantages which it offers for instructing the public and promoting our own interests, and abandon the field entirely to the charlatans, who make a most profitable use of our silence. The daily papers thus exert an immeasurable influence in favor of their patrons, the quacks, and very many of our prominent preachers and politicians become the most enthusiastic and zealous supporters of the unprincipled humbugs and knaves who are allowed to subsist upon the credulity of the public, because of the encouragement they meet with through our silence and failure to instruct the public. We discountenance and denounce all individual advertising through the press, or even by gratuitous attendance upon the poor, no matter how modestly and inoffensively practiced, whilst we not only tolerate, but encourage, the sedulous cultivation of the so-called official and allowable methods of advertising resorted to by the members of the cheap medical schools throughout the country, who have united themselves into faculties for mutual advertising clubs solely for the purpose of self-aggrandizement by bringing their names prominently before the public as professors or specialists in certain departments. We ignore the existence of quackery in our midst by refusing to expose its baneful effects, as witnessed by us in our daily intercourse with the sick, by failing to instruct the people in regard to the general truths of medicine; by allowing the otherwise intelligent to remain so profoundly ignorant of our science as to believe the most absurd and nonsensical misrepresentations of nostrum-mongers, and by calmly

tolding our arms in stolid indifference, as if firmly convinced that we can not bring about a reformatory influence in matters which so intimately concern us. We know that moral suasion can exert no influence with impostors, and yet we fail to recommend suitable legislation to put a stop to their robbery and rascality.

We make literally no effort to correct and check, as far as possible, the immeasurable swindle that continues to be practiced by the false, inconsistent, indecent, immoral and infamous system of newspaper advertising of quackery, by neglecting to use our combined influence to put a stop to it, under the belief that we can do nothing in that direction. Because we can not accomplish everything that we desire, we fail to attempt a reformation in anything.

Again, until recently, we have manifested a blind prejudice against specialists. Knowing, as we do, that the medical science is too extensive, intricate and difficult for any one man to thoroughly investigate and master the whole field and make himself a competent practitioner in every branch, we have still, from selfishness and jealousy, exhibited a deep-grounded opposition to the practicing of specialties; and not until the better sense of the unprofessional created a demand for them would we tolerate them. In union there is strength, and by a division of labor communities exist, and hence to a certain extent, limited by the nature of the art, a division of labor is not only desirable, but indispensable for its full development. In every purely mechanical art, the more constantly the attention is directed to one single branch, the more frequently and continuously the same manipulation is gone through with, the more perfect and accurate will the artisan become in his performances; and hence, in those departments of our science where mechanical skill and delicacy of manipulation are required, those who devote their time and attention to one separate branch are more likely to become expert than those who attempt to perfect themselves in everything.

We would not, however, advocate the manufacture of specialists, as too many doctors are now made, merely by giving them their title of oculist and aurist, but we would recommend that men possessed of a thorough knowledge of our science be encouraged to devote their time to the study and practice of whatever particular department their tastes may direct them—men

of the highest order, who are capable of thinking correctly and of engaging in original researches in our science—for by this division of labor we can expect to accomplish more in developing our science and perfecting our art than by any other means.

Now, strange as it may seem, the opposition to specialists, which so long prevailed, came mainly from those who were continually advertising their special claims to perfection in specialties as professors in our colleges, but, knowing the advantages of such notoriety, were unwilling that those who were unconnected with their institutions should share the advantages and profits with them. They were always ready to discourage and denounce every individual specialist, but at the same time sedulously engaged in proclaiming their own advantages in practicing certain special branches of *which they and their friends had made them professors*. This same thing is being practiced now all over the country, and is the principal inducement held out to men to become professors in cheap medical schools. It is the meanest kind of humbuggery. It is the bitterest curse to our profession, and the most glaring swindle of the age. A number of ambitious men, whose talents are not sufficient to attract the attention of their medical brethren, conclude to promote their own interests by the foundation of a *mutual advertising club*, and forthwith they apply for a charter for a college, which, under our beautiful laws, they can as easily establish as a soap factory, and at once proceed to set forth in circulars their superior advantages and qualifications for teaching the science of medicine (God protect the art!), and, to prove their unselfishness in their undertaking they offer to teach and treat everyone gratuitously who may see fit to listen to or to employ them. They offer every inducement for them to come up from the highways and byways to be treated and taught for nothing. And, at the same time that they are working from purely selfish motives, they lay claim to the most marked disinterestedness imaginable, and claim that their only motive is to elevate the standard of the medical profession. They pay no regard to the preliminary qualifications of their students, but seem to think that every man, no matter how uncouth or ignorant he may be, is qualified to enter upon the study of medicine. They claim that all men of worth and talent must inevitably succeed, that they can show all the road to success, and that those who do not succeed are necessarily not qualified, and must give way and pursue some avocation less dignified and less

honorable than ours, and better suited to their mental capacity. No matter what our efforts at reform may be, we can accomplish nothing whilst this state of affairs is allowed to exist.

Such has been the experience of the profession at large for more than a quarter of a century. *Personal self-aggrandizement and college combinations* have thwarted every attempt at reform, and until we can free ourselves from such thralldom, any general advancement of the welfare of the profession will be utterly impossible.

For more than twenty-five years the representatives of reform have urged their claims before the American Medical Association. In May, 1869, at New Orleans, they thought it would be right and nothing more than reasonable to make it obligatory on all medical faculties to demand \$120 as a minimum fee for a full course of lectures, believing that it would be a means of limiting the number and improving the morale and mental standing of medical students; but this recommendation did not meet with the approval of the *advanced corps of reformers at all*, for they contended that such an exorbitant sum might be necessary to compensate eight professors for lecturing under the old regime, but no such sum was requisite for eighteen or twenty enthusiastic men imbued with the proper love of science, and bent upon working for the profession solely for its own good. Our medical teachers also met in separate conventions for several successive years, and determined that something must be done to save us from further degradation, but they always adjourned as they had commenced their sessions, divided in opinion as to any uniform course to be adopted, and determined to push their individual and corporate interests regardless of the general welfare of the profession. Thus the whole matter of reform remained unsettled, until fortunately, or unfortunately, as the case may be, numerous enterprising and ambitious cliques in our large cities and small towns, as if by inspiration, detected the error in the old plan, which had proven so destructive and degrading to our profession, and determined with the *most unselfish motives, laying aside personal considerations entirely*, to revive all the broken-down medical colleges in the country, and to start as many new ones as possible, well stocked with *learned professors* who would be glad, for the good of mankind, to lecture for half-price, for no price, or even to pay for the privilege of lecturing, if, by so doing, they could only have an opportunity for elevating the stand-

ard of our great and glorious profession. Cheap schools and innumerable teachers, we are told, is to solve the problem which has so long puzzled us. They have already made formidable headway in forcing their ideas upon us, and whilst I rejoice that many of them have already failed in the crusade, I regret that some of our older institutions have been forced, or induced by self-interest, to join their ranks, and that the American Medical Association has given a quasi endorsement to the degrading and suicidal scheme. Fully appreciating, as they did, that the community at large cared nothing for medical men except the use they could make of them, and that cheap doctors, like cheap stores, were greatly in demand nowadays, they took courage and placed a marketable value upon their own qualifications, and in a few years have brought about a grand competition in the manufacture of cheap doctors. In fact, they have rendered the profession so cheap that, if their success at demoralization continues, they will deter the most honorable, high-minded and intelligent men from entering our ranks in the future.

Our profession is a liberal one, always has been, and I trust may ever continue to be. We do not desire to exclude any qualified man, no matter how poor he may be, from the honors, rewards and emoluments of our profession; we do not wish to be understood as inaugurating a crusade against any class of practitioners, no matter how widely we may differ from them; we simply demand that they be honorable men, and possess a correct knowledge of the science of medicine. Nor do we wish to circumscribe, in the least, freedom of thought, speech and action in regard to our profession. We acknowledge that every member of this community has the inalienable and undoubted right to judge us by our actions, and to employ as his or her physician any qualified man or woman he or she may see fit, every statute of our State, every law of our country and every resolution of a medical society to the contrary notwithstanding. We do not believe that freedom of thought or action should be abridged or encroached upon in the least, in regard to the medical any more than the clerical or legal professions, but we do desire to have our organic laws so altered as to properly define what constitutes a physician in the eye of the law, and to put a check upon the easy and rapid manufacture of doctors lacking proper qualifications. We are unwilling that every fool or knave who sees fit to style himself doctor or pro-

fessor shall enjoy the privilege of imposing his pretensions upon an unsuspecting community, for we do not believe that the public is so wedded to quackery as to desire to be humbugged by such impostors. Moreover in spite of the advice of our model reformers who expect to accomplish so much good by their manufacture of doctors, and who profess to treat with silent contempt every encroachment of quackery, we contend that every sensible man must acknowledge that the experience of forty years has proven how futile our attempts in that direction have been. The current of popular credulity has increased instead of decreased during that period, and now that so-called universal free education has been established throughout the country, there can be nothing too preposterous and absurd to be believed and adopted by a large portion of every community; as is proven by the rapid spread of every ism that panders to the credulity and immorality of mankind. Quackery has been allowed to monopolize the public press, and avaricious and unprincipled editors whose every word and act is controlled by money, have aided in every possible way in the dissemination of falsehoods and foolishness in regard to medicine. Newspaper advertisements and editorial commendations of quacks has so long constituted almost the only source of instruction to the general public upon medical subjects that a vast number of people accept such lies as truths, and become inspired with a feeling of confidence in them which no medical man can successfully combat, and more especially is this the case when the religious press lends its columns (as it so often does) to the dissemination among the public of all manner of vileness, dishonesty and immorality; all sorts of misrepresentations, absurdities and inconsistencies; all that will make the masses know less of truth and more of error. There has been no want of interest in reforming these by the majority of our profession, but for twenty-five years, whenever the subject has been brought before our medical associations, the most strenuous opposition has been met with from professors in the various schools, who have always contended that legislation could accomplish nothing, and have claimed that the panacea for the cure of all evils in our profession was the elevation of the standard of medical education, which they propose to accomplish by the very means of all others best calculated to degrade it, viz.: by the multiplication of medical schools and the cheapening of medical education and medical diplomas. They have

assumed that they were *the profession* and so far have carried their point on almost every occasion.

Now, gentlemen, I trust that you have not misunderstood my strictures upon medical colleges, or concluded that they have been inspired by selfish motives on my part, for such could not be the case, when individually I have never been connected with one except as a student. No one can entertain a higher regard for high-toned medical schools and competent medical teachers than I do, and I not only admire them, but wonder at the grand results they have accomplished under the many difficulties that they have had to contend with in this country. How with limited means and no endowments, men—capable men—have found so much time to spend in the lecture room, clinic and hospital, and have given not only their services and talents, but hard-earned money which they could ill spare for the maintenance of the high-standing of these institutions. I honor all such men, but contend that we can best assist and encourage them in their noble work by demanding a high standard of medical education, and by encouraging only refined, educated and honorable men to enter upon the study of medicine. We need learned men, men capable of original thought, and thorough research in our own profession, and an increased number of learned specialists, whose specialties have grown out of their intimate knowledge with their whole profession as a science, and who prefer to practice some one part of the art. We do not need numbers, for surely the army of seventy-five thousand doctors that are now employed in this country is sufficient to minister to the miseries of all. Nor do we expect every M. D. to be a learned medical philosopher, but we do desire them to have sufficient education to fulfill their duties with credit to themselves and benefit to mankind. It is not necessary that every physician should be thoroughly accomplished in every department of our science, but it is desirable that all of us should be refined gentlemen, and reasonably well educated men.

There was a time when it was a distinguished honor to gain the title of M. D., and when it conferred upon us privileges not enjoyed by other learned men, and why should not the same hold good to-day, for surely we are no less entitled to the respect and honor of our fellow-citizens than our predecessors were. We may not have as many giant intellects in our ranks as there were during the early part of the present century,

and there may not be any now living who are as much entitled to the homage and gratitude of man as were Harvey, Hunter, Jenner, Cooper, Mott, Velpeau and a host of other medical heroes of their day, but surely we have more accumulated knowledge and more deep learning than they had, and have done more for the general benefit of mankind. Not that the human mind has increased in power and perfection in modern times, so that we can now seize intuitively, as it were, on what cost the ancients much study and application, and hence know all that they did, as a matter of course; for the infant of 1875 requires as long a time to learn to talk and to walk, or to acquire any other accomplishment, for aught that we can see to the contrary, as did the Egyptian babe. There are no intellects nowadays superior to the most brilliant of ancient times, but our facilities for acquiring knowledge have vastly improved, and we can hear and learn more real facts in a few weeks than the ancients could know in a thousand years, or ever know at all. The little that has been transmitted to us, however, from the earliest ages must impress us with the greatest respect for the learning of antiquity, and as we become more familiar with what the ancients knew and had accomplished thousands of years ago, we may be brought to believe that their wisdom was not so inferior to ours after all, and that we have no just claim to cherish the idea of modern perfection.

Finally, gentlemen, I trust that in spite of all our discouragements and disappointments we will remember that medicine is the most ancient, the most useful, and the most honorable of all professions. The art of medicine probably had its commencement in the earliest community. The old adage, *nusquam medicina non est*, is literally true, but the science of medicine is of comparatively recent origin, and is as yet, notwithstanding the immense advances that have been made, still in a very imperfect condition, and there is work enough for all of us to do. We have as yet seen but the beginning of what can be accomplished in the saving of human life, and the prevention of human misery.

Our science has many claims upon us, and humanity demands that every medical man should do his utmost towards the correction of existing errors, the utilization of existing facts, and the increasing of our knowledge by original investigations. None of us should be too modest to express our opinions, or con-

sider ourselves too young to have an opinion. Every man is obscure in science until he makes himself otherwise, and in our profession as in every other, young men have always done more than older ones for its advancement.

Vesalius published his great original work on anatomy when but twenty-nine years of age. Andral published his on pathological anatomy when but twenty-seven years old, and Bichat had completed all his immense labor before he was thirty. Newton was but twenty-three, Copernicus thirty-three, Kepler thirty-eight, Harvey and Marshall Hall but forty one when their respective discoveries were made. So we must look to the younger members of our Society for its advancement and support, and remembering that we meet here for the purpose of advancing our science and art, we must practice mutual forbearance towards each other, and allow no selfish motives to obtrude themselves here, for science knows no party, clique or school, but is dignified, charitable, liberal and magnanimous to all.

Other favorite methods of advertising are the *running* of medical journals, hospitals and free dispensaries. Every cheap-school needs its official organ to puff it; its hospital or dispensary to make an exhibition of its charity and to build up the reputation of its accomplished specialists, who would never become known without it.¹ The majority of them have naturally been very short lived, and the profession has lost nothing by their early death. In fact it would be much better for the medical profession and the community at large, if two-thirds of the minor journals and medical schools now in full blast, were suddenly extinguished. Advertising through hospitals and dispensaries has been much more profitable and extensive in its scope than the journalistic plan, and has been a favorite one both with the schools and prominent quacks for many years, until now in all large cities it is a *sine qua non* for success. "In 1876 there were forty-four medical dispensaries in Philadelphia; doubtless there are more now, as such institutions *rarely fail*. Besides these, there are an

1. To prove how zealously this field has been worked I note some statements taken from one of the oldest and most valuable medical journals in the United States. In the January number of the *Boston Medical and Surgical Journal*, Dr Billings gives a concise history of medical journalism in this country; as follows: From 1797 to 1878 inclusive, 249 regular medical journals have been started in this country, most of which were intended as advertising media for medical schools and private individuals.

Indeterminate number of private and special dispensaries, as well as the dental dispensaries, where surgical operations are performed and treatment prescribed. The hospitals of Philadelphia, at present number forty according to the statement of a member of the State Board of Charities, this including a few like the Howard Hospital and the Charity Hospital, which have no accommodation for resident patients, and are simply dispensaries. In these hospitals, there are now over *eleven hundred empty beds*; or in other words, five hospitals, the size of the Pennsylvania Hospital might be closed to the public without being missed by the community. Other large cities are equally as well supplied in proportion to their population. The metropolis, New York, of course, greatly exceeding all others in the grandeur of her eleemosynary institutions and her magnificent charities, both public and private. In our own city the Health Commissioner, includes in his weekly reports, thirty-eight institutions; most of them however are not hospitals, but merely asylums and homes. We have not suitable and sufficient accommodations for our insane and paupers."

"The laborer is worthy of his hire, but if the efforts of those who persistently saw away at the branch that supports them prove successful, the currency value of a physician's services will soon be an unknown quantity, to be represented only with the aid of the metric system, perhaps as a dynamized centesimal dilution of nothing at all."

ARTICLE XIV.

OBSERVATIONS AND EXPERIMENTS WITH THE AGENTS EMPLOYED IN ANÆSTHETIC MIXTURES. By LAURENCE TURNBULL, M. D., of Philadelphia, Aural Surgeon at Jefferson Medical College Hospital.

These various mixtures of chloroform with ether and alcohol, were used as means of escaping the danger of chloroform. They first received their impulse from the report of the Chloroform Committee of the Medical Chirurgical Society of London, who declared their superiority in point of safety. M. Perrin¹ gives an account of the first death known at that time, to have taken place under a given mixture of ether and chloroform and gives the credit to the chloroform as being improperly administered, and Snow says the patient died of hemorrhage, but our reading of the case, carefully reported by Dr. R. Crockett,² leaves the decided impression that chloroform arrested the heart's action, induced vomiting, which caused a stoppage of respiration. The following is an abstract of the important facts in the case and is interesting as the first death from the mixture. "A sprightly little boy, five years of age, was brought to the doctor to have a fatty tumor removed from his back. The tumor commenced at a point at its inferior termination opposite the last rib, about two and a-half inches to the right of the spinous processes, and extending obliquely upwards, crossing the spine seven inches, requiring two elliptical incisions nine inches long for its removal." The operation was commenced at 9:30 A. M., April 4th, and the dissection was rapidly executed, stopping to ligate a large artery that was early divided; the remaining arteries were compressed as they were divided; the tumor was quickly removed and a ligature applied to the last artery, being the sixth in number. While sponging the wound the boy began

1. *Traité d'Anesthésie Chirurgicale*, Par Maurice Perrin, Professeur agrégé à l'Ecole Impériale de Médecine et de Pharmacie Militaire, etc. A Ludger Lallemand, Professeur agrégé à l'Ecole Impériale de Médecine et de Pharmacie Militaires, etc., Paris, 1863. 8 vo. pp. 668.

2. *Am. Journal Med. Sciences*, July, 1857. 284-5.

to vomit, and on examining the wrist he was found to be pulseless. Dr. K., who had charge of the anæsthetic and pulse, replied that "the pulse had never given way until he began to vomit." He ejected a small portion of the contents of the stomach. He was immediately placed in the "prone position," as recommended by Dr. Marshall Hall; the finger was introduced into the mouth to be certain that the tongue had not fallen back so as to obstruct the glottis, or the entrance of air into the wind-pipe, and the extremities were rubbed with aqua ammonia. The patient died three or four minutes from the commencement of the vomiting. "He lost probably four ounces of blood, certainly not exceeding six." There was no post mortem examination.

The anæsthetic we used was a mixture of washed ether, four parts, and one of chloroform, obtained from the late Frederick Brown, of Philadelphia, whose character is a sufficient guarantee that they were pure. Every preparation for the operation having been made, the administration of the anæsthetic was commenced by Dr. Crockett, observing all the precautions so fully recommended by Erichsen, p. 78 of his "Operative Surgery." As soon as anæsthesia was induced the sponge was confided to Dr. Kincannon, who held his finger all the while on the patient's pulse. The doctor concludes, "I have lately employed this anæsthetic freely, formerly having used ether alone. *As yet I have not seen a case of death reported from ether*, or this mixture of it with chloroform, that I can now recollect. Are there any such reported? I fear all the deaths from anæsthesia are not reported." Five deaths³ from the use of this mixture have been published, two having occurred very recently.

The chief object of these anæsthetic mixtures is the avoidance of the danger from *shock* or from the depressing influence upon the heart-action, which chloroform most certainly exerts and which ether and alcohol prevent. The committee before referred to proposed the following mixtures:

A. Alcohol.....	1	Part.
Chloroform.....	2	"
Ether.....	3	"
B. Chloroform.....	1	"
Ether.....	4	"
C. Chloroform.....	1	"
Ether.....	2	"

3. On The Advantages and Accidents of Artificial Anæsthesia by the writer. 2d edition, pp. 300. Lindsay & Blakiston. 1879.

Dr. Sansom's mixture⁴ is equal parts by measure of chloroform and absolute alcohol. The introduction of alcohol which plays an important part in the mixture was, according to the Doctor, due to Dr. Harley. The committee says it is by "the uniform blending of the ether and chloroform, when combined with alcohol, and probably the more equable escape of the constituents in vapor." The chloroform is the potent agent and the others chiefly adjuvants, vehicles and dilutents of the chloroform.

Dr. Sansom gives the following testimony as to the stimulating effects of alcohol in counteracting the depressing influence of chloroform. In my own experiments I have found that alcohol has had the greatest effect in sustaining the heart action during the influence of the chloroform. I can particularly recollect one instance in which alcohol having been administered in vapor to a frog, it was impossible to cause death by any strength of chloroform vapor. In recommending this mixture before the Obstetrical Society, of London, Dr. Sansom went one step farther, and stated that this mixture gives off a proportion of chloroform vapor in a given time almost exactly half of that which is given off by chloroform pure and simple. This result is not confirmed by any experiments of his published.

What are the objections to anæsthetic mixtures?

1. The length of time required for the production of complete anæsthesia.
2. The probability of entire sensibility not being abolished.
3. The unequal rate of evaporation or vaporization of the fluids.

There is not any doubt but that the process is slower and attended with more excitement by the mixed fluids than by chloroform alone. The second objection can not be sustained. The third is the "element of danger." It was first advanced by Snow. He says: "When ether is combined with chloroform the result is a combination of the undesirable qualities of both agents without any compensating advantage," and the danger is because the operator, toward the end of the process, may be giving a pure chloroform when he thinks he is giving the weaker mixture of vapors. Dr. Ellis⁵ endeavored to prove this, and states:

4. Chloroform: its Action and Administration. By Arthur Sansom, M. B., London.

5. On the Safe Abolition of Pain in Labor and Surgical Operations, 1866, by Anæsthesia and Mixed Vapors. By Robert Ellis, Surgeon Accoucheur, London. 1866, pp. 80.

"Out of the six or seven minutes occupied by the evaporation of the half dram of fluid, the first was occupied chiefly by the ether, the next three by the chloroform with a little alcohol, and the last by the alcohol alone. In an inhaler the patient would have breathed, for one-fifth of the time, chiefly the vapor of ether, for the next three-fifths that of chloroform with a little alcohol, and at last only the vapor of a minute quantity of alcohol" (pp. 24, 25). These results are not stated as obtained by actual experiments, and they depend, first, upon the purity of the agents employed; second, the boiling point has a great influence upon the results, for the more volatile the fluid the greater will be the variation, and I here give the boiling point of the most important anæsthetics.

The temperature which is constant for the same substance, under the same atmospheric pressure, is called the *boiling point*.

The following are the agents employed as anæsthetics in the form of vapor, the boiling points being given for the mean pressure of 760 millimetres:

Protoxide of nitrogen.....	—88°
Carbonic acid.....	—78°
Chloride of Ethyl v. pure ether.....	+11°
Common ether.....	35°
Chloroform.....	63°
Alcohol.....	78°
Oil of turpentine.....	157°

A difference of pressure of 0.25 centimeter will cause a difference in the boiling water one-tenth of a degree. The boiling point is also influenced by dissolving in a fluid a substance more volatile than itself (as ether and chloroform); it increases the boiling point in proportion to the amount dissolved. The temperature of the atmosphere has a powerful influence on these volatile agents, as it is a well-known chemical fact that the saturability of the air increases vastly with the increase of temperature, and the capacity of the air for aqueous vapor is doubled with each 27° of temperature Fahrenheit. Sulphuric ether at 60° F., and thirty inches of the barometer expands two parts in the air into three, and forms, therefore, at that temperature and pressure, one-third of the air inhaled into the lungs of a patient. Under the same circumstances chloroform expands fourteen parts of air into fifteen, and consequently the vapor of chloroform constitutes one-fifteenth part of the air inhaled.

The following experiments were made October 30th, 1878, so as to determine the time required for each of the agents to evaporate on a given surface of tissue paper suspended in the air at a temperature of 70° F., one drop of each being carefully measured by the same dropping machine, and the time accurately kept by my son, Dr. C. S. Turnbull, and confirmed the rough experiments made before the Dental Convention at Washington, D. C., on October 10th, 1878, and proved the facts stated in the author's work ⁶. I have always found that when such a mixture was poured upon the inhaler, the most volatile spirit will arise first, then the next, and so on, leaving the last easily evaporated upon the inhaler. Another important fact was proven, and which was referred to in the author's work, that the alcohol employed in the mixtures with chloroform in England, also the ether made from such alcohols, are much inferior to those made in this country from grain, not from wood or potatoes. These latter are slow in evaporation, and are mixtures themselves containing a large amount of carbonaceous products.

The following are the results obtained after numerous experiments with as many of the agents employed in the various mixtures obtained from the reliable establishments of Powers & Weightman, Bullock & Crenshaw, Wyeth & Bro., and J. P. Remington:

Ether.....	12 seconds.
Chloroform.....	24 "
Alcohol Ab. 95°.....	1 min. 24 "
Ether (common) 0.750.....	24 "
Methylie alcohol (B. & C.).....	1 min.
Alcohol (common, W. & Bro.).....	10 "
*Potato spirit (B. & C.).....	12 "
Ether hydrobromic (R.).....	12 seconds.
Temperature, 70° F.	
Barometer, 30.08 inches pressure.	

*Again put through charcoal.

Besides the danger from inhaling the chloroform pure and simple, there is another to be prevented, that is to get rid of the watery vapor from the mixture and lungs of the patient, which collects on the sponge; if the napkin or inhaler gets close to the patient's mouth and nose it will most effectually prevent

6. The Advantages and Accidents of Artificial Anæsthesia. By Laurence Turnbull, M. D., Philadelphia. Lindsay & Blakiston, 1879.

air from reaching the lungs. How is this to be prevented? By squeezing out the sponge, napkin, lint, or if an inhaler is employed that cannot thus be treated, cast it aside and take a clean napkin, with as much starch in it as possible, so as to keep its shape. It may again be inquired which is the best mixture to employ in ordinary surgical operations. The mixture C. In midwifery, mixture A, or, as it is familiarly known, A C E or ace of spades mixture, the most agreeable of all. In the operation for ovariectomy I prefer the C mixture, as also advised by the late Dr. Washington Atlee; the volume of the two agents are so different that they ought to be mixed by weight, not by measure, else the chloroform will be much in excess, as it is four times the weight of ether. In employing alcohol it should be as near to absolute as possible, and free from color, smell or taste. The ether need not be anhydrous, but ordinary strength and well washed. Whatever mixture is employed, nothing will obviate the necessity of care in the administration, and above all not to give more of the agent than is absolutely necessary to keep the patient free from pain; not one drop more, for, like all potent medicines which we employ, an excessive dose is sure to kill, and unless we have before gauged the patient's powers, let caution be our guide in the administration of so powerful an anæsthetic. In our anxiety to see the various steps of an operation, do not saturate the sponge or lean over the patient, and by accident suffocate him. It is unfortunately too much the practice to entrust the inhaling apparatus to some inexperienced hand, who perhaps never before administered an anæsthetic, and even in some hospitals to the youngest assistant surgeon or dresser. It has been well observed by Perrin, "We believe we shall render a veritable service if we popularize the idea that anæsthesia should be observed and studied at the hospital with as much care as every other subject of practical medicine." Sanson⁷ also says, "The administration should be experienced; several hospital committees have acted wisely in appointing a chloroformist, a measure which is not of less value to the operating surgeon than it is to the benefit of the patient. One who administers chloroform in any case should confine himself exclusively to the task he has undertaken, and should constantly mark the symptoms." And what are the symptoms of danger?⁸ The

7. *Op. Cit.* p. 477—31.

8. See *Accidents and Advantages of Artificial Anæsthesia*, *Op. Cit.* p.

failure of the pulse, irregularity of the respiration, and the blanched countenance, and, as beautifully expressed by an old writer⁹ in reference to successful administration of anæsthetics, "Proceed steadily but cautiously to the end in view. He makes haste slowly, and with a boldness tempered by wisdom, carries his patient down into the dark valley which borders on death, drowns human agonies in the water of Lethe, and triumphs in the crowning glory of his art."

ARTICLE XV.

ON PREVENTION OF PUERPERAL FEVER IN PRIVATE PRACTICE. By
CARL WALLISER, M. D., of Highland, Ill.

More than twenty-five years have elapsed since Semmelweis directed the attention of the medical profession to the etiology of puerperal fever. His assertions that the feverish diseases of the puerpera are for the most part due to blood infection resulting from resorption of decomposed putrid matter, have frequently been assailed. He made many enemies by putting the question, whether infection might not also be produced through the hands and instruments of midwives and physicians? In this decennium only scientific men examined these assumptions of Semmelweis, and finally adopted the theory: That most puerperal diseases are due to infection, which infection in the majority of cases comes from without. Since in the large lying-in hospitals antiseptic precautions for prevention of puerperal fever have been taken, since the patients have been treated in the same manner as those suffering from traumatic fever, septicæmia, pyæmia, etc., morbidity and mortality of the puerpera have greatly diminished. Many private physicians and particularly country practitioners keep clear of the etiology of the puerperal diseases. Without examining the cause of infection and the spread of the epidemy, many "doctors" fill up the morbidity-list and mortality-tables with the handy entries, "milk fever,"

9. I. C. R. *Am. Jour. Med. Sci.* 1867, p. 190.

“puerperal peritonitis” or “self-infection.” I know many cases where exitus letalis would have been avoided through an early rational prophylaxis. It should be, for every physician, a case of conscientiousness, a sacred duty, to avoid that death of a once healthy mother be occasioned by malpractice through ignorance or through neglect.

As a pupil of Bishoff (of Basel), the pioneer of “obstetrical antiseptics,” I have not only assisted at his first operations even, but I also, in the course of my practice, both here and in Switzerland, made it a point of modifying and simplifying Bishoff’s antiseptic method for the use of private practitioners. I have performed under antiseptic auspices all kinds of manual and instrumental obstetrical operations, and I never have seen during the puerperium any symptoms of resorption fever.

Before mentioning the most practical points of the prophylaxis of puerperal diseases, I shall give in the table (as an illustration) a brief report on a recent epidemic of puerperal fever, its probable origin and spread. All the cases registered in the table were attended to by the same midwife; they were all normal accouchements, taken care of by the midwife alone. Several women, who during the epidemic were delivered by physicians or other persons, escaped the danger of infection and remained free of disease in puerperio. Of the reported cases I saw one on the first, two on the second and all others between the third and eighth day; several of my patients have been seen and examined by my colleagues. I know that during the same time other physicians of this place had sick puerperas in treatment, and that death occurred in four of their cases. As far as I could ascertain the same midwife had also attended these women. Concerning the origin of the epidemic, I have made scrupulous investigations. Previous to October, 1876, diseases of lying-in women were not often met with in this town for some years. The first case noticed was an elderly multipara, who had been delivered of a dead, decomposed foetus; the midwife attended at the same time three women, who all fell ill. From October, 1876, to February, 1878, cases of puerperal fever came into treatment in long or short intervals. I do not remember one case of a then delivered (by the mentioned midwife) woman, where during the first week there were not more or less grave symptoms of the disease. It may be cited as an important etiological moment that during the winter of 1876 and 1877, scarlatina pre-

REPORT OF A RECENT EPIDEMY OF PUERPERAL FEVER IN HIGHLAND, ILL.

LEADING SYMPTOMS AND PARTICULARS.			ISSUE.	REMARKS.
1	Oct. 2, '76	Mrs. N., multipara	recovery	confined of a puerile child.
2	Oct. 13, '76	Mrs. W., "	recovery	placenta detached.
3	Oct. 30, '76	Mrs. B., "	recovery	hemorrhage post partum.
4	Nov. 11, '76	Mrs. Bl., "	incomplete recovery	hard labors.
5	Nov. 12, '76	Mrs. Fa., "	recovery	dirty surroundings.
6	Dec. 7, '76	Mrs. K., primipara	recovery	
7	Jan. 4, '77	Mrs. M., "	death.	Case seen in consultation with Dr. F. Marine.
8	Jan. 22, '77	Mrs. Sp., multip.	recovery	
9	Jan. 31, '77	Mrs. H., "	tardy recovery	diagnosis of a colleague; milk fever; placenta detached.
10	Feb. 18, '77	Mrs. F., "	recovery	
11	Aug. 8, '77	Mrs. L., "	insanity	profound perineal rent.
12	Aug. 19, '77	Mrs. Ba., "	recovery	placenta torn out.
13	Aug. 2, '77	Mrs. Br., "	recovery	scarlatina in the family.
14	Aug. 11, '77	Mrs. Ha., "	death	case seen in consultation with Drs. F. & K. Highland reported as "milk fever."
15	Sept. 2, '77	Mrs. Sch., "	recovery	
16	Sept. 15, '77	Mrs. Sch., "	recovery	
17	Sept. 20, '77	Mrs. S., primip.	recovery	
18	Oct. 18, '77	Mrs. S., primip.	recovery	
19	Dec. 18, '77	Mrs. S., primip.	recovery	
20	Jan. 16, '78	Mrs. Sch., multip.	recovery	
21	Feb. 5, '78	Mrs. S., primip.	death on 14th day	saw the patient 8 days after delivery; also examined by Drs. R. K. & F. Highland.

vailed in the neighborhood and it is proven that the midwife had been in contact with children suffering from diphtheria and scarlatina. Among the population of our district (about 3,000) morbidity and mortality rates of lying-in women were very high at that time; a "physiological" puerperium was an exception, a "pathological" one the rule. What country practitioner does not remember similar periods, when most of the obstetrical cases in his village expired under more or less grave symptoms of septic fever, when many well attended puerperal cases died from peritonitis, septicaemia and pyaemia?

Most of the text-books on midwifery give etiological moments for origin of the puerperal fever, the artificial detachment of the placenta and the decomposition of such of its particles as remain behind in the womb. We accept this theory, though not to its full extent. How often does the medical attendant detach the placenta, and how seldom does resorbent fever occur, provided there is not a prevailing epidemic, a cause of infection? Every obstetrician knows, that those lying-in women have a greater liability to puerperal fever, as have undergone some manual or instrumental operation; particularly when protracted labors preceded or when the surgeon's hand worked under very difficult circumstances. Large lacerations and contusions are very often the result of such operations of neglected cases. "*Without wounds, (says Bishoff) and without infection of these wounds there is no puerperal fever.*" Small wounds or rents of the parturient canal are an addition to almost every accouchment, the infection being only too often carried by the hand or instruments of the attendants, or by the foul air surrounding the patient.

The principles of prophylaxis of puerperal fever are three-fold:

I. To avoid protracted labors and dangerous contusions by early and well performed manual and instrumental operations; to prevent spontaneous perineal rents through lateral incisions.

II. Prevention of accumulation, decomposition and putrefaction of retained membranous or placenta rests; to facilitate the escape of discharges; to occasion a good contraction of the uterus.

III. *The exclusion of unclean matter, foul air from the genitals*; closing of rents (silk, catgut, silver wire sutures of superficial and deep lacerations of vagina, vulva and perineum); most scrupu-

lous cleanliness of the attendant physician, midwife and nurse; antiseptic treatment of all wounds, whether superficial or deep, large or small; to avoid any contact of undisinfected objects (fingers, sponges, instruments, linen, wadding, etc.,) with the vulva and vagina before, during or after delivery; in one word, *prevention of all infection from without.*

In realizing practically the principles of obstetrical antiseptics, we shall detail this method, which strikes us as the simplest and surest, and which has led us to very satisfactory results. Before exploring a parturient woman, I wash both hands and arms in a warm water solution of two per cent carbolic acid. I require the same process of the midwife or any other person whose fingers come in contact with the parturient canal. As unclean, dirty (i. e. infectious) matter adheres very often to the sleeves, and is not so easily noticed there as on the fingers, the coat must be taken off and the shirt sleeves turned up. In many hospitals students are directed to put on taffety sleeves when attending lying-in women. This should be avoided, as these over-sleeves, when not thoroughly disinfected, rather spread than prevent the infection. I have often found expectorated matter on the inner and outer side of the coat sleeves and cuffs after attending children suffering from diphtheria. What physician, upon entering the room of a puerpera, remembers all the cases to which he has lately attended? Why do obstetricians so often speak of the coincidence of puerperal fever with scarlatina and diphtheria? In exploring the parturient canal the hand should be well anointed with carbol oil (ac. carbol 1, ol. oliv. 9). We never use the butter or grease offered us. All instruments are washed in the carbol water, and before the use anointed with carbol oil. The midwife is ordered to follow the same directions. From the beginning of the first labors to the birth of child and placenta, we practice every two hours a warm-water injection in the vagina; and when there are any signs of decomposed liquor amnii, or when the labors are protracted, we substitute for it a two and one-half or three per cent carbol. ac. solution, of which several pints are injected at short intervals. We have found that such injections clean perfectly the parturient canal and prepare it for an easier passage of the child. Immediately after propulsion of the placenta, we inject into the cavum uteri the above-mentioned two to three per cent solution of the antiseptic (the water must be cold). We have found the best instruments for these intra-

uterine injections those which consist of a soft rubber tube three feet long, one end attached to a metal or hard rubber tube half the length of the common stomach catheter, the other end communicating with a large funnel or a reservoir holding one gallon. By alternately rising or sinking this "irrigator" we may adjust the power of the stream to all demands. Thus we may use great power to carry away placenta rests, less power for simply washing out blood clots.

These prophylactic measures are continued throughout the puerperium. After "physiological" accouchments, we perform vaginal injections twice a day for two weeks, by means of an ordinary syringe with a piece of soft rubber tube on its nozzle. When there are symptoms of accumulation or decomposition of the discharges, or when rests of the placenta or of the membranes have remained, we make every three to four hours the above mentioned intra-uterine injections of the same (two to three per cent) solution of carbolic acid. Rarely a double-current catheter is necessary to secure the free exit of lochia and injected liquid. Tute, impregnated with carbolic acid, or wadding soaked with ten per cent carbol. oil, is always laid in the introitus vaginae. Many obstetricians scatter a mixture of acid, salicyl. and amyllum (1:5) on the inner side of the labia, and on all wounds and contusions. Whatever materials we use must often be renewed. When in puerperio the contraction of the womb lessens, secalē may freely be given in combination with injections of cold water in the cavum uteri; the contraction of the uterine walls with its veins and vasa-lymphatica prevents any decomposed matter spreading in the serosa and parametrium. The general condition of the puerpera ought never to be neglected. I allow sufficient aliment, finding the commonly prescribed "water-porridge" not to afford nutrition; any intercurrent disease may be treated without regard to the local antiseptis. Great care must be taken that the bowels are regularly moved, as constipation in the puerperio increases the hyperemy of the pelvic organs; oleum ricini (15.0), tartarus natronatus (15.0:50.0 aq.), magnesia sulph. (30.0:90 aq.); acid, sulph. dilut. with water and sugar are such laxatives as may be used to assist the prophylaxis of the puerperal fever.

In hospitals the practice of puerperal antiseptis is somewhat different. Schede uses a self-holding drainage-tube for constant irrigation; Chamberlain, Schüeking and others recommend more

or less complicated instruments for the same purpose; the practitioner prefers his syringe to costly irrigators.

To-day almost everywhere carbolic acid is used as the most powerful antiseptic. The boracic acid is less irritating, but also less powerful; it is used in a four per cent solution; the hyposulphite of soda (five per cent) is a harmless, but often insufficient surrogate of carbolic acid. Salicylic acid is frequently used as a disinfectant in the proportion of 1 to 600-900 of water (salicylate of soda does neither prevent nor arrest putrefaction; it should be excluded from the list of antiseptics). "Sanitas," so boastfully recommended of late from the English markets, is, according to Dr. Glaser's investigations,¹ even when strongly concentrated, not as powerful as a three per cent solution of carbolic acid. The almost obsolete thymol has lately been re-introduced into surgical practice, and is now claimed to be the best and most useful antiseptic, being ten times less detrimental to the organism than carbolic acid. In Volkman's clinic, at Halle, the following formula is used for external antiseptic purposes: thymol 1.0, alcohol 10.0, glycerine 20.0, aq. 1000.0.

Dr. Ranke, in Vol. 128 of *Volkmann's Sammlung Klinischer Vorträge*, gives an account of the success of thymol, and his results encourage the introduction of this "antiseptic of the future" into the obstetrical practice. P. Bruns (*Berliner Klinische Wochenschrift*, 1878, Vol. 29) strongly recommends alumina acetica as an excellent antiseptic, well qualified for constant irrigation. Probably the disinfectant powers pertain to the acid, as a one to two per cent solution of acetic acid gives the same result as one of alumina acetica of the same strength.

All these surrogates of carbolic acid have been tried in order to find a substitute which might possess all the advantage of carbolic acid without having its detriments. It is well known that Lister's antiseptic method has many opponents; who will be surprised if "Listern in midwifery" is assailed?

"Carbolic acid has a poisonous effect" is their war-cry; and Lister's adversaries gather scrupulously all cases where a patient died during or soon after the application of the antiseptic. Not wishing to deny a direct idiosyncrasy of certain persons against carbolic acid, I find, in examining the details of the reported cases, no proof for the absolute dangerousness of the anti-

1. Correspondenzblatt für Schweizer Aerzte, 1878, No. 19.

septic method. Death during or immediately after the resection of the hip-joint, after the operation of strictura ani, after opening of a thorax empyem, has often occurred before Lister's method was known.

Individuals suffering from rupture of the cervix uteri, from pelvic peritonitis, from abscesses with discharge of pus through the bladder, from erysipelatous abscess of the glutæus muscle, and suppuration of the knee-joint, died suddenly under the application of the antiseptic. Are such fatal cases really due to carbolic poisoning? Is the bold conclusion, "*post hoc ergo propter hoc*," a just or even a logical one? Senfteleben thinks that carbolic poisoning is produced by the presence of phenol in the blood; he recommends in such cases as antidote a sulphuric acid mixture (acid sulph. 1.0, aq. gumos 200, syr. 30.0; one tablespoonful every hour), the produced sulpho-carbolic acid being innocuous.

We will not close this paper without referring to the position of the midwife in cases of puerperal fever, and its prevention. In the country these women attend to almost all accouchments, and there is probably no practitioner who has not been inconvenienced by want of knowledge and by stubbornness of the midwife. Protracted labors, dangerous operations, might often be avoided through a more rational and natural action of the attendant.

In some places of Germany, all midwives who attend women suffering from puerperal fever are prohibited by law from the practice of midwifery for a certain period. Such bold infractions upon individual rights and freedom can exist wherever a strong police is supported by the nature of governmental institutions. Simpler and less shocking sanitary measures are those which interdict the obstetrical practice to every person (either physician or midwife) who is not fully acquainted with the principles and practice of every day midwifery, and who does not know how to prevent infectious diseases in puerperio. A better scientific instruction of all obstetricians, stricter and exacter examinations of the candidates for the practice of midwifery will answer the demands of modern medical science better than prohibitory laws. Why continue to expose patients to an increased chance of death from diseases that are preventable? Why sacrifice so many lives through neglect or indolence? To realize the principles of obstetrical antisepsis in private practice and in the country is

less difficult than in overcrowded hospitals and dirty tenement houses.

Spencer Wells, Tarnier and others have obtained satisfactory results without antiseptic treatment and prophylaxis, by scrupulous cleanliness alone; for most private practitioners an absolute cleanliness is, and will always be a vain wish, as they cannot enforce such sanitary precautions as prevail in the private hospital of Wells, and in the Paris maternity.

ARTICLE XVI.

WHOOPIING COUGH; A NEUROSES, PATHOLOGY AND TREATMENT.
By J. J. CALDWELL, M. D., of Baltimore, Md.

Being impressed with the apparent truth of Niemeyer's views of the pathology of this disease, viz: "That whooping-cough is a catarrh of the respiratory mucous membrane, combined with intense hyperæsthesia of the air passages;" this, together with the various other excitable or nervous demonstrations, etc.; the periodic and very rapid and jactitating cough, and temporary brain and spinal demonstrations, and the cerebral and facial arterial injection, followed by the apparent utter intermediate immunity—all pointing to the fact that this was but a periodic seizure of the peripheral nerves distributed to the mucous membrane of the air passages.

The investigation of this subject was forced upon my observation during the summer of 1870, in Brooklyn, N. Y., where this disease was epidemic. My own children suffering terribly, induced me to search in every direction for a more ready method than the time honored—of several months duration. I found that there was but little unity in its pathology or treatment, some advocating quinine for its antiperiodicity, and others the light carburetted hydrogen emanating from the gas factories as acting successfully through the nervous system, etc.

My conclusion was this: If Niemeyer's ideas are correct, whooping-cough has its origin in a local nerve lesion of the mu-

cous membranes of the air-passages with excessive catarrh. "*Ubi irriatio ibi affluxus.*" Ergo: A topical application of anæsthetics with gentle astringents, would be the treatment indicated.

It seems strange to my mind that this famous master did not fall into the same reasoning. Therefore I adopted the following treatment with my little ones, as well as a dozen other cases, with most happy results. (Reported in *Boston. Med. and Surg. Jour.*, April, 1871.) Also a report of several cases with like results in a late number (1875) of the same journal, by Dr. Winthrop Spooner.

My mode of treating in these cases was very simple and ready, viz.: to place Codman & Shurtleff's steam atomizer in position on a table before the patient, charged with—

R. Fl. ext. belladonna.....	gtt vj-xij.
Ammon. brom.....	ʒj.
Pot. brom.....	ʒij.
Aqua dist.....	f ʒij.

This spray is rapidly carried over into the face, mouth, and lungs of the child, and applied ten to fifteen minutes, until the pupils are dilated by the effects of the belladonna mixture; this application to be made morning, noon and bedtime. This has so far cut short the spasmodic cough within two or three days uniformly, and almost to a certainty. More recently we note reports of cases of pertussis successfully treated (almost instantly) by the inhalation of sulph. ether, in this instance discovered by Dr. —, while dressing a fracture of a child suffering from whooping-cough. The first administration cut short the malady then and there. The Doctor followed up this experience with the happiest success, the history of which he has given to the medical journals, thus again sustaining my theory of its neurosis and the good effects of anæsthetic treatment.

Again, during this discussion¹ (before the section) my views were maintained; although the treatments differed, still they all pointed to the nerve origin. The beneficial effects of vaccination, on this affection, as ably demonstrated by Dr. W. B. Ulrich, Chester Pa, and strongly indorsed by several leading physicians present, though the *modus operandi* of course is obscure, still to my mind maintain its nervous lesion. The argument, that because whooping-cough is contagious and constitutional, it could

not be treated locally, nor considered a neurosis (offered on the above occasion) does not obtain in this any more pertinently than it would in the local treatment of vaccination as a prophylaxis in small-pox, etc. If it be said that the vaccine is absorbed and thus acts constitutionally, the same may be said of the bromo-belladonna application to the bronchio-alveolar surfaces.

Says Dr. J. Winthrop Spooner (see the *Boston Med. and Surg. Journal*, November 5th, 1874): In the *Journal*, dated April 20, 1871, appeared an article by John J. Caldwell, M. D., of Brooklyn, N. Y., entitled, "A New and Successful Treatment of Pertussis." The treatment recommended was the following:

R. Fl. ext. belladonna.....m. v to x.
 Potass. bromid.....ʒi.
 Ammon. bromid.....ʒij.
 Aqua.....ʒij. M.

Sig. Inhale one tablespoonful in the ordinary steam atomizer.

Several successful cases were reported, but since that date I have seen no report of cases treated in that way.

Feeling that we have in this method of treatment a great addition to the therapeutics of a disease often distressing, and sometimes fatal in its results, I have been led to publish a few cases of my own treated in a similar manner. I am in the habit of using a tablespoonful of the above mixture and filling up the glass of the atomizer with water.

CASE I—April 1st.—A boy of 14; has had the disease for two weeks. The cough has been severe and the whoop well marked. Vomits after nearly every meal. The next record is April 5th, which is as follows: Patient has been at the office daily and used the atomizer. His cough has been less since the first inhalation, and he has whooped but once. The vomiting has ceased, and there is present but a slight cough, which is not distressing.

CASES II and III were two children (brother and sister), aged 15 and 12. Well marked symptoms of whooping-cough had been present for two weeks. The same remedy was used four days, under my supervision, with decided abatement of symptoms. As they were improving, I lent them a hand atomizer, which I afterwards understood they used only for a day or two. The cough lingered for several weeks in both cases, although

the whoop was never well marked after the use of the atomizer. In fact, during the latter period, the disease seemed to be a simple bronchitis and nasal catarrh, the result of a series of colds, as the patients were very imprudent.

CASE IV.—A child, *æt.* 3; coughs; febrile symptoms for ten days; yesterday, for the first time, had a decided whoop; vomited every meal to-day; face is swollen, eyes congested, and this morning lids adhered from excessive secretion. The atomizer was used twice daily. Improvement commenced at once. From that date there was no vomiting, the countenance resumed a natural appearance, and at the close of a week the whoop had ceased, and in less than a fortnight not the least trace of the disease was present.

CASES V, VI and VII were children of one family, aged eight, five, and three years respectively. The disease had existed for about two weeks; the symptoms were mild, but sufficient for diagnosis. Treatment was commenced on June 27th. On June 30th I saw them again, and there was a decided improvement. At the close of one week from the commencement of treatment they were well.

CASE VIII happened at the same time with the preceding three and the history was similar.

CASE IX.—A child aged 2; she whooped for the first time on July 20th. On account of her age, there was difficulty in administering the remedy thoroughly, and perhaps it was on that account that for the first few days there was no perceptible improvement. However, the treatment was continued, and by the 26th the symptoms had much abated and by the 30th the patient was well. A little syrup of squills and tolu was used in this case, as a palliative, in the first few days, and this is the only case in which any treatment but the inhalation was used.

CASES X and XI were a little girl of seven and her mother. With the former, the cough and whoop had been present for four weeks, and the mother had coughed for two weeks. The health of these patients was delicate, being predisposed to pulmonary disease, and a sister of the lady had died of phthisis,

following pertussis, it is said. In both these cases, although the urgent symptoms were relieved, that is, the vomiting ceased and the cough and whoop became much less frequent under treatment, yet the disease went through its regular course in a mild form.

Says Dr Spooner, This, then, is the result of my treatment of pertussis by inhalation. When the disease is at all severe, I use the atomizer twice daily until the urgency of the symptoms is relieved, and then continue it once daily until the cough has entirely disappeared. In some cases, I have somewhat varied the proportion of the ingredients, but have made no essential departure from the formula given.

My further experience has thoroughly maintained the great benefits arising from this mode of treating whooping-cough, and I truly believe it to be the readiest and most reliable extant, and furthermore believe that I am the originator of the idea that whooping-cough is a nerve disorder, and that I was the first to treat it as such, and that my treatment was new and reliable. I make statement to bring out the merits of my case, and earnestly hope my brethren will discuss it candidly, freely and fully.

65 N. Charles Street.

Reports on the Recent Progress of Medicine.

THE SPIRIT OF THE EUROPEAN MEDICAL PRESS.

By A. C. BERNAYS, A. M., M. D., Heidelberg; M. R. C. S., Eng.;
Member of the German Society of Surgeons, Berlin, Etc.

A SIMPLE TREATMENT OF POST PARTUM HEMORRHAGE—(Dr. Pugliese in *Lyon Medical*.) Although we gave it as our opinion, in a late discussion of the subject at the St. Louis Medical Society, that post partum hemorrhage is very rarely the cause of death, we think the plan here advised deserves to be brought to the notice of the profession, it being quite new, and because it may be of service in some cases.

"The method I employ has suggested itself to everyone. It is simply *inversion of the body*. The patient is seized by the shoulders and turned a quadrant of a circle, the center of which is her pelvis, out of the bed, and her head declined until it reaches the floor. This practice, besides fulfilling the first indication, partially subverts the second.

"If the heart, which has lost part of its energy, can no more propel the blood to the last ramifications of the uterine arteries, the patent mouths of the sinuses of this organ, which are suddenly transferred to the highest part of the venous circulation, having become vertical, lose their prime cause of bleeding. The blood thus takes its natural flow to the vena cava. Then nothing remains but to stimulate the womb to contraction, and reinstate its physiological function.

"The assistants are charged to support head and shoulders of the patient. The obstetrician proceeds to external and internal frictions of the womb.

"A subcutaneous injection of ergotine is made in the hypogastric region with a hypodermic syringe. The solution ought to be prepared during labor, for the possibility of post partum hemorrhage ought never to be disregarded, especially after protracted labor.

"This is the only reliable way of administering ergot in such

cases, for, taken internally, it might not be absorbed; besides it would be impossible to bring it into the stomach when the head is hanging downwards; nothing but some alcoholic liquor can be administered by means of a sponge put into the mouth.

"My theory has not been sanctioned by long experience, and I will mention a recent case devoid of anything not intimately connected with the subject: My patient was held inverted on a strongly inclined plane for one hour and a-half. When I began treatment, she was pulseless for several minutes, and before I could feel the returning pulse at the wrist, consciousness manifested itself so far that she began to talk. The tongue gave signs of life before the radial artery. Inversion alone worked such a miracle. This fact alone seemed to warrant me in publishing the above notice. It is scarcely necessary to add that the patient must not be placed in the horizontal position but by degrees."

Decidedly the treatment of Pugliese is reasonable, and worth as much as any method practiced heretofore. Is it not astonishing that, although we have practiced raising the pelvis for a number of years, no one has thought of going one step farther, and performing total inversion?

ON EXARTICULATION OF THE HIP JOINT.—(*Bulletin de l'Académie de Médecine*, 1877, Nos. 44, 48, and 1878, Nos. 4, 8, 12, 13, 16, 17.) The rather long discussions on the above subject were caused by a speech delivered by M. Verneuil, October 30th, 1877, in which he reduces the fatal results of exarticulation of the hip joint to two main causes: the great loss of blood and the unsuitable, inadequate after-treatment of the large wound. The first point elicits a discussion of the methods of exarticulation, and we propose to give a concise statement of the principal points made by the speakers on this subject. The second point led to a discussion on the treatment of wounds which we must pass by, as it contains nothing original, this subject having covered thousands of pages of surgical literature within the past three years.

VERNEUIL claims that the compression of aorta abdominalis is often impossible and most incomplete. The prophylactic ligature of the femoral or external iliac is insufficient, on account of hemorrhage from the branches of the arteria hypogastrica.¹

1. R. Davy's new method of compressing the common iliac artery with a shaft from the rectum may do away with this difficulty.—(*British Med. Jour.*, vol. i, p. 704).

Verneuil therefore recommends an exarticulation by making two flaps after the fashion of the extirpation of large tumors with a scalpel, advancing gradually, layer by layer, and by ligating all vessels doubly before cutting them. By this means he reduced the bleeding to a minimum in three cases. In a fourth case, where he made use of the galvano-cautery, he experienced great hemorrhage, collapse and death after two hours. Verneuil has also approved of this method at the shoulder-joint, and since 1872 has found it to answer admirably, even in the larger amputations.

ROCHARD is in favor of the method for the two largest exarticulations, only remarking that Marc. Duval operated after a similar plan in 1858.

MAURICE PERRIN believes that this method could only be considered blood-saving in the hands of very skillful and experienced surgeons. He recommends an incision similar to Langenbeck's for excision of the hip-joint, claiming (and we believe correctly) that the flaps can be cut out very rapidly after the head of the femur is exarticulated, and that manual compression of the parts will control the hemorrhage.

RICHTER holds the opinion that the flaps can be made very rapidly, the vessels compressed by sponges and tied successively, as he has done with the best results in two cases.

LEGUEST has found it best to cut out the anterior flaps, layer for layer, in fresh traumatism, but forms the posterior flaps by a single incision, using manual compression after the bone has been exarticulated. In chronic diseases the dilatation of the vessels is so great that the speaker is in favor of Verneuil's method.

LEFORT thinks that at all events there is sure to be considerable bleeding from the smaller vessels when the slow method of advancing is made use of, and sides with Perrin. But, if out of 88 well described cases, 43 resulted fatally within twenty-four hours, 13 within forty-eight hours and 18 within a week, the hemorrhage during the operation is certainly not the only cause, but the loss of the blood contained in the amputated limb bears a large proportion of the blame. According to the experiments of Profs. BRUNS and RANKE, the amount of blood equals 750 grmms., (25 $\bar{3}$). This is supported by the fact, that out of 158 cases of primary exarticulation during the war of the Rebellion 142 died

(nine-tenths), but of 8, whose thighs had been amputated previously, 4 recovered. In the literature of "peace surgery" we find, that 8 out of 10 cases recovered in the same manner. LeFort proposes that an Esmarch bandage ought always to be applied to the sound limb; in some cases he proposes that the blood be allowed to collect in the sound limb up to the close of the operation by means of a tourniquet applied to the femoral vein.

(KÖHLER, Staff Surgeon German Army. The more important cases from the clinic of Prof. BARDELBEN, treated during the time, from January 1st, '76-'77.)

During this period of time (the latter part of which the reporter himself spent in Charité Hospital under Prof. Bardelben,) 2,000 surgical cases were dismissed from the Hospital. Out of this number we will give the following statistics, which seem to us of especial interest, leaving the rest of the very accurate report for the private study of those interested.

1. *Accidental Diseases after Traumatism.*—Erysipelas occurred twenty-three times; 8 cases occurred under the antiseptic treatment; 10, in cases that were not treated by this method; 5 did not originate at the place of the traumatism. Erysipelas was the direct cause of death in one case only.

2. Pyæmia and septicæmia appeared in 6 cases after they had been in the hospital some time.

3. Comminution of the bones of the foot excepting talus and calcaneus; subcutaneous and intramuscular hemorrhage, as far as the middle of the leg. Next day, amputation after Pirogoff; second day fever as high as 40° centigrade; sixth day, phlegmone; seventh day, erysipelas; fifteenth day, pleurisy; twenty-fifth day, brown and reddish sputa; twenty-ninth day, death. Post mortem revealed numerous hemorrhagic infarcts of the lungs; veins of the leg permeable, their parietes normal down to the wound itself.

4. Compound fracture of the ankle-joint in a woman, aged 72 years, (comminuted fracture of the malleol. int., fracture of talus and fibula). Conservative treatment. Fever on the fifth day; eleventh day, offensive, profuse suppuration; thirteenth day, epileptiform access; secondary hemorrhage, parenchymatous inflammation, nineteenth to twenty-third day; chills,

twenty-third to twenty-fifth day; twenty-eighth day, hemorrhage from the space between talus and tibia. Excision of malleol. int., which let out an ounce of very offensive pus; no open vessels could be found; daily disinfection; death from pyæmia mult.

5. Compound fracture of the tibia, with extensive contusion of soft parts. When admitted there was emphysema surrounding the wound. After twenty-four hours, temperature of 40.1° ; continued stream of solution of salicylic acid over wound; acute purulent œdema following. Amputation femoris on the seventh day; death following in a few hours.

(a.) PYÆMIA (4).—I. *Traumatic Inflammation of the Knee-joint.* Puncture by aspirator; removal of pus; washed and injected with carbolic acid; wound sealed by plaster; next day erysipelas, starting from leech bites (the leeches having been applied before admission to Charité); after 12 days large collection of pus, about the middle of the thigh, communicating with the knee-joint; incision, striking pus; antiseptic dressing; death.

(b.) SEPTICÆMIA (2).—1. Severe bruise of both feet, great subcutaneous destruction of soft parts, and fracture of bones of the tarsus. Gangrene of the skin over the malleoli after a few days. Antiseptic dressings. Eleventh day, offensive supuration; twelfth day, pus empties into the ankle-joint; excision of malleolus ext.; continued fever; temperature of 41° ; death by septicæmia.

2. Frost gangrene of both feet; clear demarcation on ninth day, but beginning sepsis; temperature 45.5° ; amputation of both legs; temperature again reaches 40° after second day; necrosis of flaps; death by sepsis.

There were four deaths from chloroform out of 1,500 administrations. Only very small amounts of chloroform had been given in the four cases. Not only these cases, but a number of disagreeable narcoses caused us to introduce the new chloroform prepared from the hydrate of chloral. No more accidents since its introduction.

Translations from the German.

PHYSIOLOGY AND THERAPEUTICS IN OPHTHALMOLOGY. [Taken from Prof. A. Nagel's *Jahresbericht ueber die Fortschritte und Leistungen im Gebiete der Ophthalmologie*]. By S. POLLAK, M. D., Surgeon of the Eye and Ear Infirmary of the St. Louis Hospital.

EFFECT OF CHLOROFORM NARCOSIS UPON THE PUPIL.—There is a great divergence of opinion in regard to the therapeutical effect and physiological explanation of chloroform narcosis on the pupil.

WESTPHAL (*Virchow's Archiv*, Vol. 27) has examined a great many pupils under chloroform, and found, except in very anæmic individuals, that the pupil regularly contracted at the beginning of the narcosis. The temporary dilatation, in those not deeply narcotized, which follows an irritation of the skin, or on loud calling, he attributes to the reflex action of the sympathetic. Westphal leaves it undecided whether the contraction arises from irritation of the fibres of the oculomotorius, or from the inaction of the fibres of the sympathetic.

BUDIN (*de l'état de la pupille pendant l'anesthésie chirurgicale produite par le Chloroforme. Indication pratique qui peuvent en resulter Gaz. des Hop.*) arrives at the following conclusion: In surgical chloroform anæsthesia there is a constant relation between the condition of the pupil and the degree of anæsthesia. In the stadium of excitement the pupil is always dilated, but it contracts gradually and strongly as soon as relaxation of the muscles ensue, and remains contracted while anæsthesia lasts. Strong excitement of the sensibility of any part of the body causes transient dilatation of the pupil. With continued inhalation this reflex dilatation disappears, and the pupil remains strongly contracted. This is the time for operation. A dilatation of the pupil during the operation indicates a less profound anæsthesia and a return of sensibility. The condition of the pupils is therefore a good guide in chloroforming patients. Vomiting may

also cause the pupil to dilate, and partially suspend the anæsthesia. Budin's work has in view chiefly a practical surgical object.

SCHIFF (*La pupilla come estesiometro. Imparziale* 1874) sought and found in the movement of the pupil an æsthesiometer to determine the sensibility, especially in curarized animals. With curarized dogs and cats every irritation of the sensory nerves in any part of the body resulted in a dilatation of the pupil, even when the irritation caused no pain, and excited only the tactile sensibilities, such as touching of the skin. The greater the sensibility, the greater the dilatation of the pupil. The dilatation manifested itself after the quickest and gentlest touch, which could not have changed the blood pressure. There was no other sign of feeling. Hence the dilatation of the pupil is the best reaction of sensibility. Schiff has thus attained important results in regard to the sensibilities of different organs and tissues that have hitherto been left in doubt. Irritation of any of the tissues, even muscles and tendons, will cause the pupil to dilate more or less. Of the spinal cord only the posterior columns are sensitive. An electric current applied to the gray matter of the cord, or to the anterior and lateral column, may cause a rise in the blood pressure, but it will not cause dilatation of the pupil.

There is some sensibility in the anterior four-fifths of the cerebrum, but none in the cerebellum. Electric currents in the intestines produced no dilatation, but mechanical irritation did. The dilatation of the pupil upon the irritation of the sensibilities is effected through the cervical sympathetic. It is suspended after its division, as well as the division of the medulla oblongata. In the brain is the change of the sensitive impression into the motor impulse. On the removal of the portion of the brain anterior of the corpora striata, the reflex action upon the pupil becomes slower, but on the entire removal of the brain the iris responds only to the impression of light, but not on irritation of sensibility.

The condition of the pupil during chloroform narcosis, according to Schiff, differs widely from Budin's observation. In the commencement of the narcosis and until complete relaxation, Schiff found entire dilatation of the pupil, and that through the active contraction of the dilator or radiating fibres. Myosis does

not continue in dogs (except sometimes in a very late stage of the experiment) long after a general muscular relaxation denotes great danger, or after death having ensued. Of eleven dogs which were chloroformed to the lowest blood pressure, or nearly to death, in four only was there a moderate contraction of the pupil, and never so strong as Budin states it to be. The dilatation which ensued, after sensible irritation, was only of short duration. Schiff concludes that the moment for operation, as indicated by Budin, is just the most unfavorable one, for all reaction upon sensible irritation is then extinct. There is a period in chloroform narcosis when all feeling of pain ceases, but consciousness is not entirely gone, when incisions or sawing of bones are perceived as mere tactile impressions, for the sensation of pain is conveyed to the brain through the gray matter of the spinal cord; but the tactile impressions through the white matter of the posterior columns, which, being less vascular, do not so readily succumb to anæsthesia, and retain their function a little longer. Budin seems to have confounded impression from contact with sensation of pain.

Schiff refers to many observers who, like himself, have found the pupil of man and animals *dilated* during chloroform narcosis, but Budin has also many endorsers who saw the pupil *contracted* while in deep narcosis of chloroform. From these diametrically opposite results, we must conclude that chloroform does not act on all animals alike, and further, that the different brands of chloroform were of unequal purity.

O. LIEBREICH, the distinguished chemist, maintains that when, on inhalation of chloroform, dilatation of the pupil ensues, that the chloroform is mixed with bodies of the bichloride series, which has the property to dilate the pupil, with final transition into the dangerous contraction stage.

Other anæsthetics which affect the pupil are mentioned by Schiff. It occurs in inhalation of nitrate of amyl that sensibility is retained, as manifested by the cries of animals, and yet the pupil does not dilate on irritation of sensibility, the very reverse in chloroform. Chloral exhibits the opposite effect of chloroform on the pupil, namely, a *very strong contraction*, a true myosis, without a preceding dilatation. The reflex dilatation upon irritation of sensibility ceases entirely, although other manifestations of pain continue for a while longer. Inhalations of chloroform which were made after an injection of chloral in a dog,

brought about a slow dilatation of a strongly-contracted pupil. This militates against the general assumption that chloral acts by being converted into chloroform in the body.

ORE was the first to inject chloral into the veins in tetanus; he suggests to use the same procedure as an anæsthetic in surgical operations. It is condemned by the learned societies of France as unwarrantably dangerous. Nevertheless, experiments were continued by Oré, DeNeffe and Van Wetter with good results, without any of the dreaded dangerous consequences, such as embolism, phlebitis, hæmaturia.

WARLONT (*Des injections intra-vieneuses de chloral comme agent d'anæsthesie chirurgicale. Ann. d'ocul*) discusses the advantages and disadvantages of the injection of chloral into the veins, as an anæsthetic in surgery. His own experience extends to eleven successful cases. More than thirty are reported without an unfavorable result. "All roses, but thorns will follow." Among his observations are two on the eye; an enucleation, and an extraction of cataract, both with aged people, (68 and 74 years). One of these cases was affected with chronic bronchitis and emphysematous lung, yet this condition was no obstacle to the successful result. The advantages of the anæsthesia by intra-venous injection of chloral are: Prompt and positive effect; accuracy of the dose; anæsthesia is followed by a protracted, quiet sleep; absence of an exciting stage; absence of vomiting, and compatibility with derangement of respiratory organs.

The disadvantages are: Difficulty of execution; necessity of utmost care and caution; the long duration of the effects of the application; possibility of embolism, phlebitis, hæmaturia, and intensity and long continuance of its effect, without the possibility of counteracting it.

SCHIFF (*l'imparziale*) arrived at the following conclusions after more than 5,000 experiments, as to the difference of anæsthesia by ether or chloroform: Ether paralyzes first the respiration, and after that the blood-vessels and the heart; while chloroform can paralyze the heart and blood-vessels at once, without previously paralyzing the respiration. Artificial respiration with the latter agent is then useless, as oxygenation has ceased. Compression of the abdominal vessels and lowering of the head may be of advantage. Chloroform can cause death at the first inspiration. Ether is safer and less dangerous.

BADER, in his ward in Guy's Hospital made some experiments with the administration of *croton chloral hydrate* in intolerance of light (*Med. Times and Gaz.*). The result appears to be, that it proved efficacious only in young subjects suffering from syphilitic kerato-iritis, in doses of from five to ten grains, several times a day. But twenty grains were given four times a day, without appreciable good or bad effect. The bad taste of the croton chloral hydrate was the greatest objection.

GLAUCOMA—Continued. Excerpts from a Lecture by L. WECKER.
[Translated by WM. DICKINSON, M. D., of St. Louis, from
Klinische Monatsblätter für Augenheilkunde for 1878.]

As intimated in a previous number of the JOURNAL, our author suggests a new operation for glaucoma, and instruments adapted to its performance.

SCLEROTOMY.

I have caused to be made sclerotomes of different widths, from 2 mm. to 4 mm., having lance-shaped extremities. With these I penetrate the anterior chamber at one millimetre from the corneal border, holding the instrument parallel with the iris, and then carry it tangentially to the upper or lower extremity of the corneal diameter, through the anterior chamber. The angle of the iris is thus incised in all the course of the sclerotome. The section termed subcutaneous, by the employment of a sclerotome of 2 mm. in width, describes, in a cornea having a diameter of 12 mm., a curve of 10 mm. The operation performed in a cornea of like diameter, with a sclerotome of 3 mm. furnishes a curve-section of $12\frac{1}{2}$ mm. You have often seen me perform these operations; and among others upon a colleague who was affected with simple glaucoma of the left eye. Three months after the operation he wrote to me that "he was well satisfied with the result and he thought it would be permanent." Still I do not at present wish to express myself upon the comparative effects of sclerotomy and iridectomy. Most probably

the beneficial effects of the operation would be increased, if the sclerotome should be held tangentially to the corneal border, and the section increased in extent by a-third or a-half-millimetre, provided the operator is perfectly sure that the inner section describes an uninterrupted curve, and the trabecular tissue at the iris angle, in the vicinity of the upper or lower extremity of the vertical diameter of the cornea (according to election of place of sections) is deeply incised. By this mode we can properly make use of a very small sclerotome, which facilitates the operation.

Formerly I performed sclerotomies with a simple Graefe's knife—but the necessity of enlarging the section by a sawing movement, and the difficulty of making two sections opposite each other of like extent, determined me to have knives made by which these accidents might be obviated with a sclerotome 2 mm. broad. Two wounds situated near the corneal border are obtained, distant from each other about 1 mm. and describing a curve of about 3 mm., in a cornea having a diameter of 12 mm.; and by the employment of a sclerotome of 3 mm. a broad curve of 4 mm. is secured.

I shall not speak of the sclerotomes made by Quaglino with a lance-shaped knife, nor those by Bader and Spencer Watson, with v. Graefe's knife. The section made by the former having the same extent as in the iridectomies, and those by the latter exceeding them. These sections appear to me inevitably to incur the danger of iris compression (*iris einklemmung*), which would be entirely avoided by the use of smaller sclerotomes and the employment of eserine. Every sclerotomy should be preceded by several instillations of this alkaloid, and its use should be continued for several days thereafter. (Two instillations daily, with a change of bandage, which the patient should wear for two days.)

Generally, no operation for glaucoma, whatever mode may be adopted, should now be undertaken without the previous employment upon the patient of eserine, but it should be borne in mind that in acute glaucoma the effect of this myotic is but very imperfectly manifested. I frequently ask myself, what effect, probably, would A. v. Graefe obtain with the calabar extract in acute attacks, when he recommended this agent, not as Laqueur did, for the alleviation of the glaucomatous symptoms, but in order to contract the pupil and thus facilitate the introduction

of the knife into the anterior chamber without injury to the lens? Evidently the considerable increase of intra-ocular pressure, and the impediment to absorption resulting therefrom, renders quite ineffectual even the best eserine in producing contraction (though sufficient for the introduction of small instruments), and such must surely have been the result of the employment of the extract of calabar bean.

I should weary your patience should I still speak of the so-called myotomies of the ciliary muscle, as Hancock and Heiberg have performed them. These operations, however, have been of value in demonstrating that subcutaneous division of the trabecular tissue at the iris insertion is capable of producing quite satisfactory curative results. They also furnish me with proof that excision of the iris plays no active role in the operation for glaucoma. However, these modes of operation, uncertain in their results, have been entirely abandoned.

In two classes of cases I earnestly insist upon the avoidance of excision of the iris and the adoption of the simple section, and these are, when you are convinced that you have a case of hemorrhagic glaucoma to deal with, in this instance the double section, with a small sclerotome (2 mm.) affords you protection against the dangers to which you are exposed by the section for iridectomy; and in cases of absolute glaucoma, sclerotomy, by preference, should be employed where nothing more is thought to be obtained by the operation than relief from the violent ciliary neurosis.

In these cases, instead of enucleation, instead of making fruitless attempts to excise an iris completely atrophied, instead of producing the dislocation of a lens already threatened, and of inducing considerable internal hemorrhage, which will still further increase the pain, perform, without delay, sclerotomy, which can be repeated if necessary.

In conclusion, permit me to say a few words respecting the eserine cure in glaucoma. According to the purely empirical experiments which Laqueur has made in the employment of eserine in glaucoma, if atropine produced glaucoma, its antidote should cure it. Unfortunately, atropine, in certain cases, does certainly induce glaucoma, but eserine never restores such. This is readily conceivable, since the increase of intra-ocular pressure and the consequent impediment to absorption prevents the undoubted anti-glaucomatous efficacy of eserine. This efficacy

(*modus operandi*) is purely mechanical, and is effected, on the one hand, in consequence of the release of the iris angle by means of the contraction of its sphincter, and of the recession of the periphery of the lens upon which the iris lies in consequence of the contraction of the orbicular portion of the ciliary muscle, and, on the other, upon the contraction of all vessels of the eye and the diminution of secretion resulting therefrom.

It seems to me that eserine should be employed in three classes of cases. 1. If by means of iridectomy or sclerotomy the pressure in a glaucomatous eye has already been somewhat diminished, then the use of this alkaloid will be of service. Hereafter no operation for glaucoma will be performed without the previous and subsequent employment of eserine. If iridectomy has not produced satisfactory results for vision, then we can adopt the eserine cure, with the simultaneous use of quinine. These modes of cure sometimes afford excellent results, and are especially to be adopted if the patient will not submit to a repetition of the operation for iridectomy or sclerotomy; but unfortunately they cannot be continued for a long time, since the conjunctiva will not tolerate the persistent use of eserine, as the condition of follicular conjunctivitis is speedily induced. In consequence of its irritant effects we are constrained to substitute therefor the instillation of the much milder but less active agent, pilocarpin, three instillations daily. 2. The use of eserine with the simultaneous use of quinine is especially indicated in the treatment of the antecedents (*prodomata*) of glaucoma. Since we know that in a case of acute glaucoma for which an operation has been performed an attack upon the other eye may readily take place (whether in consequence of sympathetic irritation, simultaneous congestion of the eye not operated upon, or of mental agitation), it is imperative that instillations of eserine in the eye not operated upon should be made during the first week after the operation. But I advise that these instillations should only be made before going to sleep in order that the effect of the myotic upon the sense of vision may not be perceived by the patient, and occasion him no unnecessary trouble. 3. The most advantageous employment of eserine is to protect the eye from consecutive glaucoma. We should never attempt to treat a rupture of the cornea in which the iris is engaged, whether it has occurred spontaneously or traumatically, without the systematic use of eserine. I have presented

to you a young man whose right eye had been wounded by a fragment of a round agate. The outer and inferior portion of the cornea and ciliary body in the same region were incised. For the removal of the injury to the iris the patient was treated for a long time with eserine and a compress bandage. A smooth cicatrix with satisfactory vision (since the lens was not injured) was the result of this treatment. A mild attack of serous iritis of a sympathetic nature which attacked the left eye speedily yielded to the use of eserine.

A great number of eyes can now be saved by the substitution of eserine for atropin in like cases. Since that mydriatic has, in extensive corneal ruptures, unquestionably contributed to produce consecutive glaucoma, and to promote the staphylomatous condition rather than to prevent it.

I close with some brief observations upon the treatment of absolute glaucoma. If the eye is very painful, and the seat of repeated attacks, by which the tension is much increased (internal hemorrhage), enucleation of an eye thus affected appears most advisable, though patients generally will not listen to such a suggestion. In this case sclerotomy and the establishment of a drain is indicated, but this can be employed only in patients whom one can have under his constant inspection, so that he can remove the gold thread as soon as it becomes a source of irritation like a foreign body.

Clinical Reports from Private Practice.

A PENETRATING WOUND OF THE BRAIN MADE BY A POCKET KNIFE. By A. T. BARTLETT, M. D., of Virden, Ill.

A report of the following case may not be without interest, as it illustrates two important points, viz.: how formidable a comparatively insignificant weapon may be made, and the occasional absence of grave symptoms immediately following fatal brain lesions:

William Walters, aged 20 years, of sanguine temperament, medium size, in a fight with a young man on the night of June 8th, 1878, received an injury which, from the immediate effect, did not seem to be serious, as, after the affray, his hat was handed him, which he placed on his head and walked home in company with others, a distance of a block and a-half. From the evidence of two bystanders who witnessed the fight in the darkness, several blows were exchanged between the combatants after Walters received the one that proved fatal, as his hat, which fell at the onset, was cut at a point corresponding to the wound in the scalp. I saw the wounded man soon after he reached his home, at which time he presented such symptoms as might be attributed to concussion, and, upon examination, found a curvilinear opening nearly an inch in length in the scalp, on the left side, below the temporal ridge, from which arterial blood was flowing freely. The introduction of the finger revealed the fact that this opening extended through the radiating fibers of the temporal muscle in an oblique direction, and that the parietal bone had been perforated, and a piece of this bone, nearly seven-eighths of an inch long by three-eighths of an inch in width, beveled at the expanse of the inner table, was so nearly detached that I removed it without the use of instruments. This done, it became apparent that the blood was issuing from an artery within the cranium, and small masses of the brain were likewise escaping. To make a satisfactory examination, I enlarged the opening in the scalp and muscle in such a manner as to form a flap, thus exposing the opening in the skull, in doing which it became necessary to sever the posterior branch of the temporal artery, which I ligated. Upon the application of cold all hemorrhage, so far as could be seen, ceased. To determine the nature and extent of the injury to the brain seemed a perplexing question, as no one present could give any positive information as to the character of the weapon used. The external wound did not indicate it, and the hat worn gave no clue, though there was an

opening in it representing an angle of about ninety degrees, which appeared to have been made with a sharp instrument.

There was little room to doubt the presence of small spicula of bone within the cranial cavity, but my own experience in the treatment of severe injuries of the brain has had the effect to incline me to a course of "masterly inactivity" in these cases, and in this one I decided to act in conformity with the teachings of an eminent author of the day, who asserts that "all officious interference is to be avoided, inasmuch as it is far better to let the missile, and even detached pieces of bone, remain where they are than to search for them at the risk of severe additional injury." Therefore a compress, moistened with carbolyzed water, was applied, and the patient placed on the left side.

The dressings, next morning (the 9th), were saturated with blood that had oozed during the night, and on the compress was a mass of brain substance (gray and white) as large as a filbert. The patient was inclined to sleep, though easily aroused; temperature, normal; pulse, 68.

JUNE 10TH.—Symptoms much the same, except starts up from sleep occasionally; walks about the room; at times seems violent, and will not tolerate anything like restraint. Prescribed a mixture of chloral and bromide potas.; would not swallow it.

JUNE 11TH.—Pulse, 50; other symptoms unchanged.

JUNE 12TH.—Bowels moved, and less mental derangement. About this time there was protrusion of the brain, which was partially controlled by keeping a compress, like that applied at first, in position by means of an elastic band encircling the head. From this date there were no marked symptoms; the pulse ranging from 49 to 54 until the evening of the 14th, when the patient was seized with a chill, followed by high fever, rapid pulse and delirium. Previous to this he had rebelled against taking the little medicine that had been prepared, although he had taken considerable nourishment, and at times insisted upon sitting at the table. He finally consented, however, to take a dose of magnes. sulph. which acted promptly; ice was applied freely to the head, and in a few hours febrile excitement had disappeared and the case progressed without material change until the 18th. During all this time the bladder was evacuated regularly and normally; the patient did not fail to respond to questions, though the usual response was "yes;" and when asking for things he seldom called them by the right name. On the morning of the 18th, after a quiet night, the pulse was 52; respiration easy; temperature, normal; left pupil dilated; drank milk when put in the mouth. About 2 p. m. there was a sudden elevation of temperature, and in less than an hour the patient died.

At the post mortem and inquest held on 19th, it was proven that the wound had been inflicted with a common pocket-knife, (a like one being exhibited to the jury) with a blade two and one-

half inches in length and five-eighths of an inch in width. This had been driven into the brain its entire length—the direction being inward and downward and slightly backward. It was evident that a rotary, or perhaps, a slightly circular movement of the blade at the moment of its entrance gave to the cuts in the hat and scalp their peculiar appearance. The largest (posterior) branch of the anterior division of the middle meningeal artery had been severed, extravasated blood filled the track of the weapon and was diffused over a large portion of the lateral surface of the left hemisphere of the cerebrum, and the effusion was even more extensive between the dura mater and the skull, extravasated blood reaching to, and being diffused over a part of the middle fossa of the cranium; the brain substance immediately around the injury seemed softened, and for a much larger area was of a yellowish tint. The left lateral ventricle, near which the knife had passed, was filled with serum tinged with blood. A spicula of bone seven-sixteenths by less than three-sixteenths of an inch lay near the opening in the skull. There were no adhesions or other perceptible evidences of inflammatory action save those already adverted to.

CASE OF SYPHILITIC ULCERATION OF THE THYROID CARTILAGES, RESULTING IN DEATH. By Drs. BARTLETT AND DREYFUS, of Louisiana, Mo.

Mr.—, æt. 40, of —, Ill., consulted us Jan. 22d last, for a throat affection involving total loss of vocal function. A brief history of the patient runs about as follows: Some nine or ten years ago he contracted syphilis, from which, however, he was fully assured by his medical attendant, that he had entirely recovered. During the interim and the time he first saw us (22d ult.), his general health was apparently good, with the exception of a very recent impairment of appetite. Family history good. He dates the origin of his present affection at about eight months ago, at which time he first discovered that he was becoming a little hoarse, which steadily increased up to the time when he first came under our care. His physician applied all means for his relief that his ingenuity could suggest, but all efforts proved futile.

Upon questioning him about the inception of his trouble, he could furnish us with nothing of interest further than that he first noticed the hoarseness already referred to; had no recollection of swallowing a foreign body; indeed, says he did not. Upon physical exploration, we found good vesicular resonance over the entire chest posteriorly and anteriorly, somewhat to our

surprise, considering the vast respiratory disturbance. On auscultation over the crico-thyroid cartilage, we discovered a very intense sibilant râle, which satisfied us fully as to where the difficulty was located. We then resorted to a laryngoscopic examination of the throat, hoping to gain some clue to the trouble, but were unable to get any benefit from this source, as we feared. The pharynx and larynx presented nothing abnormal save a very slight subacute inflammation scattered here and there. Having concluded that the case before us must be of syphilitic origin, we advised the following treatment: A direct inhalation of the vapor of tr. iodine $\mathfrak{z}\frac{3}{4}$, alcohol $\mathfrak{z}\text{ij}$, placed over a spirit lamp, together with:

R Potass. iod.....	$\mathfrak{z}\text{iss.}$
Elix. calisaya bark.....	} aa $\mathfrak{z}\text{iv.}$
Tinct. cinchona comp.....	
Syrup aurantii.....	
Aqua cinnamoni.....	

Sig. Tablespoonful three times a day.

Our patient left for home the following day, assuring us that he would keep us posted as to the progress of the treatment. We heard nothing from him until the 7th inst., when he reappeared at our office, at which time there was a decided improvement in phonation, some words being quite audible but the difficulty of breathing had rapidly increased. We did nothing for him and the subsequent day advised his return home, as death was evidently rapidly approaching. He staid a day or two longer, however, in the vain hope of obtaining relief; when, on the morning of the 10th inst., he died very suddenly while lying down at his friend's house, where he was stopping. We were immediately advised of his death, when we expressed a desire to make a post mortem examination of the case, which was reluctantly granted. Having gained the consent of his friends, we at once repaired to the house, and, in the presence of Drs. S. B. Ayres and A. C. Lonergan, we proceeded to investigate the case. There was no cyanosis, but, on the contrary, his appearance gave forth evidence that the conflict was short, and devoid of all those agonizing scenes usually incidental to death from apnoea. Upon exposing the thyroid cartilage and trachea, nothing abnormal was appreciable. Upon opening the thyroid cartilage, however, we met with a very offensive phlegmonous ulcer about the size of a silver dollar, occupying the posterior walls (rather more on the left) of the cartilages, with a deep ulceration of the whole body of the cartilage. Several pieces of detached ossified cartilage were picked out, and one large piece was seen to be lying over the tracheal aperture, which, by the way, was diminished to about one-third its normal size, owing to the ulcer impinging on its caliber. This last named piece of ossified cartilage was, it is presumed, the immediate cause of death. As before stated, nothing worthy of note was observed elsewhere throughout the respiratory tract.

We have given the case in full, believing that, owing to the infrequency of such cases, it may prove of interest to our professional brethren, from whom any comments will be kindly received. We would add, before closing, our reasons for not performing tracheotomy in this case was simply for the reason that we could not expect to accomplish much, as well as there being some unfavorable considerations of minor import.

Reports from Hospital Practice.

CASES OF ULCERS TREATED BY DR. MARTIN'S "STRONG ELASTIC BANDAGE." By F. J. LUTZ, M. D., Surgeon to the Alexian Brothers' Hospital.

Perhaps no other class of cases have taxed the ingenuity of the surgeon and the patience of the sufferer more than "those chronic ulcers" of the leg. Every remedy which the materia medica possessed, and which was suspected of the slightest "healing" property was employed in the shape of ointments, pastes and powders. Roller bandages and the Baynton method were called in as adjuncts; the general condition of the patient was looked after and yet our best efforts were most frequently not crowned with success. So when Dr. Martin announced his mode of treatment before the Surgical Section of the American Medical Association, subsequently printed in the Transactions of that body for 1877, it was at once seized upon, both in this country and Europe. The principle upon which it is founded seemed rational and it was verified by the results obtained; and if we are to judge from the recorded experience of those who had an opportunity of testing the new method, it will in future replace all others in cases of non specific and varicose ulcers.

The bandage is made of pure rubber and varies in size according to the necessity of the case (the one applicable to the majority of the cases is ten and one half in length and three inches wide). It should be applied before the patient rises, and before the veins of the leg become distended by the impeded column of blood. Care should be taken that the bandage be snugly applied and it will remain in position all day. Before retiring it is removed, cleansed with tepid water and hung up to dry, and the ulcer covered with lint saturated with oil. During the day the patient may follow his usual avocation.

The following cases are published with a view to demonstrate

the superiority of this method, and to induce others whose lot it may be to meet with similar intractable cases, to give the "elastic bandage" a trial.

CASE I.—B. E——, a German, æt., 42; occupation, cook; was admitted into the Alexian Brothers' Hospital, May 21st, 1878. No venereal disease; has always enjoyed good health. About eight years ago, he says, an ulcer made its appearance below the outer malleolus of the left leg, which gradually increased in size, and for which he was treated by various methods. Examination revealed the short saphenous vein and its branches in a state of extreme varicosity; the ulcer is almost circular in form, about two and a half inches in diameter, and covers the external malleolus; its sides are perpendicular, at least one-half inch deep, and the edges white and hard, almost cartilaginous.

The ulcer was strapped according to the Baynton method, a roller applied over this and rest in the horizontal position enjoined. For several weeks this plan of treatment was continued, but the ulcer did not heal. Recourse was then had to various local applications and constitutional treatment, consisting mainly of bark and iron. Although his general health improved, the ulcer did not, for the sluggishness of the circulation in the lower extremity was increased by his walking about. As a *dernier ressort* the firm elastic bandage was applied, as directed by Dr. Martin, and to the great delight of my patient, as well as myself, the ulcer at once began to heal, and the patient, who had hitherto complained of a sense of fullness in the leg and who could walk about only for a short time without great pain, was on his feet all day. He was discharged Nov. 12th, 1878, with the ulcer completely healed, and was ordered to wear the bandage continuously as a preventive. Up to the date of this writing no relapse has occurred.

CASE II.—R. K——, a native of Switzerland, æt., 30; a brewer; was most severely scalded on the 24th of August, 1878; his back and right arm, but more particularly his right leg, being burned. On the following day he was admitted into the hospital and the burned surfaces covered with flour, a plan of treatment, which, whilst it is most soothing to the patient, is also to be recommended on account of its cleanliness. Considerable sloughing occurred, but subsequently the wounds healed very readily, except those of the lower extremity, where several ulcers with raised edges remained. These resisted most obstinately the various methods instituted for their cure. Besides this the leg was considerably swollen, and was very painful whenever the patient attempted to walk. A firm elastic bandage was ordered—after a few days the swelling had entirely subsided, the ulcers began to heal, and he could walk about without the slightest inconvenience. At present he is again at work in the brewery, his ulcers entirely healed, but he still wears the bandage because "the leg is weak yet."

Proceedings of Medical Societies.

LEWIS COUNTY MEDICAL SOCIETY

The Lewis County Medical Society met at Monticello, Mo., Feb. 17th, 1879, Dr. R. S. Briscoe, of Lewistown, in the chair.

Owing to the very unfavorable weather and the prevalence of pneumonia throughout the county, there was a small attendance of physicians.

After reading the minutes, and other preliminary business, Dr. W. S. D. Johnson, of LaBelle, introduced a very interesting case of hypertrophy of the heart, and gave a history of his patient, his trouble, and its treatment, and requested each member to examine it. This case elicited quite an animated discussion between Drs. Connell, Briscoe, Frame and Johnson.

Dr. J. P. Frame, of Gilead, read his notes on a case of irritable uterus, and its treatment, which was discussed by Drs. Pugh, Johnson and Frame.

Dr. Risk gave a case of lumbar abscess, with its history and treatment.

Dr. J. P. Frame gave a case of psoas abscess, with peculiarities and its treatment.

Dr. Johnson gave a case of hip disease, which had been treated for rheumatism, by a respectable physician, and warned the members to be careful in such cases.

Dr. Risk read notes of a case of puerperal eclampsia. Mrs. R——, æt. twenty-two, a small, delicate nervous woman, in the eighth month of her first pregnancy; received a fall about 6 A. M., Sept. 18th. She made no complaint until about 1 P. M., at which time she suffered from severe headaches, that came on and passed off at intervals of an hour or two. Then, nausea coming on, she stepped to the door for fresh air, when the headache came on with increased violence. She then took to her bed and immediately went into a most violent eclampsia. I was summoned, and arrived after the sixth convulsion. Consciousness did not return after the first spasm. There was no edema perceptible; blood oozed from the mouth from injury of the tongue; breathing stertorous; pulse 120; no dilatation of the os; swallowed some liquids during the intervals of the spasm; administered chloroform freely, which prolonged the intervals, but would not stop the convulsions, which returned upon the least withdrawal of the chloroform. I called Dr. J. R. Lucas in consultation, who strenuously advocated Norwood's tinct. verat. vir., in 30 drop doses. This I thought was

heroic. But remembering that Dr. Southworth in the *Detroit Medical Journal*, Jan., 1877, says, "My treatment of the apoplectic form is 20 to 30 drops of Norwood's tinct. veratrum viride, and repeated every half-hour if necessary." And Dr. Fordyce Barker, in the *Buffalo Med. and Surg. Journal*, March 1877, related a case, in which he "gave veratram viride, in 10 drop doses, and repeated in a half-hour, and controlled the convulsion after the second dose." Seeing that our patient was in extreme danger, we thought we were justified in a bold course of treatment, which was happily crowned with success. We gave but 20 drops of veratram and watched our patient closely. In 15 minutes she had a slight spasm, which soon passed off; pulse, 110, and more full; repeated veratrum in 30 minutes; in 10 minutes vomited a dark greenish mucus, and became more quiet; breathing better, pulse, 100. Again at the expiration of 30 minutes we repeated the veratram, giving a third time 20 drops. Thus within one hour we had given 60 drops of Norwood's tinct. veratrum viride, which I know to be of good quality, by using it before and afterwards. Half an hour later our patient was sleeping quietly; breathing good; pulse normal and remained mostly quiet during the night.

SEPT. 19th.—Consciousness returned, but somewhat dazed, and somnolent. She had no recollection of the previous night. Ordered rochelle salts, and light diet.

SEPT. 20th, 4 P. M.,—Found the pains regular and strong, pulse, 80, mind confused but conscious; os well dilated and labor proceeding normally; one hour later delivered a dead fœtus. She made a good recovery. In this case our treatment was certainly heroic; venesection was contra indicated; chloroform had virtually failed. Chloral, bromide pot. and morphine might have succeeded. Veratrum did succeed at least, *post-hoc*, etc. Remembering the rule laid down by Tyler Smith, "to adopt the course which seems least likely to prove a source of irritation to the mother." Gooch tells us to "attend to the convulsions and leave the labor to take care of itself." Schroeder says "especially no kind of obstetric manipulation is required for the safety of the mother." With this view of the case we made no attempt to forcibly dilate the os uteri or to precipitate the labor.

This case was thoroughly discussed by all the members.

Society adjourned to meet at Monticello on the 3d Monday in April.

R. S. BRISCOE, President.

R. C. RISK, Secretary.

SOUTH-EASTERN KANSAS DISTRICT MEDICAL SOCIETY.

In response to a call published in the newspapers to the physicians of South-Eastern Kansas, a meeting of physicians was held in the Court House at Girard, on the 7th day of February, 1879, for the purpose of organizing a District Medical Society, under the laws of the State of Kansas.

Whereupon W. W. Watkins, M. D., was called to the chair.

On motion, William H. Warner, M. D., was elected Secretary.

It was moved and seconded that the counties of Linn, Bourbon, Crawford, Cherokee, Labette and Neosho constitute, for the present, the territory of this District Medical Society, which was unanimously adopted.

It was moved and seconded that this meeting be a primary meeting for the purpose of appointing the necessary committees, and taking such other steps and measures necessary towards the perfecting of a permanent organization at some future meeting. Adopted.

It was moved and seconded that when the meeting adjourn, it be to meet in the city of Fort Scott, on the first Tuesday in April *prox*, being April 1st, at 1 p. m., and that the Secretary of this meeting be instructed to notify, by letter or otherwise, the physicians of the several counties embraced in the district as above designated. Carried.

It was moved and seconded that the Chairman appoint a Committee on Constitution and By-laws and Rules of Order, and one on Articles of Incorporation, consisting of three members each. Adopted.

Whereupon the chair appointed on constitution, etc., B. F. Hepler, M. D., Wm. H. Warner, M. D., and J. H. Cushenberry, M. D. On articles of incorporation, F. F. Dickman, M. D., G. R. Baldwin, M. D., and J. H. Cushenberry, M. D.

These committees were ordered to report at the next meeting.

On motion, R. B. King, M. D., was elected Treasurer.

On motion, the meeting adjourned to meet at Fort Scott on the first Tuesday of April, 1879.

W. W. WATKINS, Ch'n.

W. H. WARNER, Sec'y.

AUDRAIN COUNTY MEDICAL SOCIETY.

The Audrain County Medical Society met on the evening of January 24th, 1879, at the usual hour, the President, Dr. Macfarlane, in the Chair, and Dr. T. A. Keeton, Secretary.

This being the regular time for the annual election of officers (the sixth since organization of this Society), the following members were chosen for the ensuing year:

President—Pinkney French, M. D.

Vice President—T. A. Keeton, M. D.

Secretary—A. M. Patterson, M. D.

Treasurer—T. P. Rothwell, M. D.

Dr. Macfarlane, on retiring from the Chair, made a short and highly appropriate speech, urging the members of the Society to renew their efforts in the discharge of all their duties, and to be more punctual in attendance upon the Society.

Dr. French, the President elect, on taking the Chair, earnestly requested, in a few brief remarks, the hearty co operation of all the members of the Society, that he may be enabled to discharge the duties pertaining to his office faithfully and acceptably.

The following standing committees were appointed by the President:

Executive Committee—Drs. Rothwell and Keeton.

Committee on Ethics—Drs. Russell, Humphrey and Macfarlane.

The Executive Committee announced that a paper on some medical subject shall be read at each regular monthly meeting of this Society. Dr. Humphrey was appointed to read a paper on "Acute Pneumonia" at our next meeting.

On motion of Dr. Macfarlane the Secretary was instructed to furnish the proceedings of this Society, from time to time, to Dr. Rumbold for publication in the ST. LOUIS MEDICAL AND SURGICAL JOURNAL.

All business for the evening having been enacted, the Society adjourned to meet on the fourth Friday evening in February at the office of Dr. French.

A. M. PATTERSON, Secretary.

Periscope of Current Medical Literature.

PRACTICE OF MEDICINE.

RETENTION OF URINE RELIEVED BY CHLORAL.—Dr. Tidd reports the case of a young woman, in the ninth month of pregnancy, who had not urinated for twenty-four hours, as a result of which the bladder was enormously distended. Catheterization was tried but failed, in consequence of the swelling and of the deviation of the urethra. Puncture of the bladder was proposed, but the patient refused to consent to it. Ten grains of chloral were then ordered every half-hour; it produced a deep sleep, during which the patient passed unconsciously an enormous quantity of urine. The evacuation commenced five minutes after the second dose of the solution. The retention did not return and seven days later the patient was delivered of a healthy child.—*Jour. de Med. de Bordeaux.*

SUBCUTANEOUS INJECTIONS OF CHLORAL.—M. Besnier lays special stress on the necessity of burying the point of the needle in the subcutaneous tissue; he introduces the needle alone, watches it to see if any blood escapes (in which case he punctures in another place) and only finishes the operation when he is certain that the fluid will not be forced into a vein. In cases of sciatica, he injects on the first day one syringeful over the point of exit of the nerve, and another over the middle of its course. On the following day he makes another injection over the external popliteus. It is in *tic douloureux*, however, that he looks for the most valuable services from the injections.—*Lyon Med.*

DIAGNOSIS OF AMYLOID KIDNEY.—Albuminuria occurring in the course of long standing suppurations, is too generally regarded as indicative of amyloid degeneration of the kidney; but chronic parenchymatous nephritis occurs under similar etiological conditions, and also gives rise to albuminuria. The difficulty of differentiating the two conditions is well known. Bartels points that the diagnosis depends upon the distinguishing characters of the urine, which in the former is clear, with little sediment and few casts, mostly hyaline, and scarcely ever blood-corpuscles. If the latter, it is always more or less turbid with considerable sediment; is dirty colored, contains many casts of every variety, and not uncommonly blood corpuscles. In those cases in which no albumen is present, there have been signs of amyloid disease in other organs; and, in order to escape error,

it will be enough to know that absence of albumen from the urine does not exclude a slight degree of amyloid disease of the kidneys.—*Brit. Med. Jour. (Med. Record, N. Y.)*

ESMARCH TREATMENT OF CANCER.—Give Fowler's solution, one drop three times a day for three days, then increase the dose by one drop every three days till intolerance of the remedy follows. Apply the following locally: Arsenious acid and muriate of morphia, each 0.250 gramme, calomel, 2.00 grammes, powdered gum arabic, 12.00 grmms.; mix. At first sprinkle only a little upon the ulcer, gradually increasing the quantity to a teaspoonful. This overcomes the odor, causes a hard eschar to form and healthy granulation takes place.—*Boston Jour. Chem.*

COUGH MIXTURE.—In any severe cough, when the tongue is red or the throat is sore, the following is recommended by Dr. Powell, of London:

R	Potassii. chloratis.....	grs. xl.
	Morphia muriatis.....	grs. ij.
	Glycerinae.....	℥ ss.
	Syrupi.....	℥ iijss. M.

Sig. To be taken undiluted and slowly, for both its local and constitutional effect. Dose, one teaspoonful three or four times a day.

—*Br. Med. Jour.*

ACUTE NEPHRITIS.—J. H., aged 27, nativity, Ireland. Three weeks ago after exposure to cold while washing, she was taken with a rigor, which was followed by fever, some pain in the region of the kidneys and violent emesis; patient had almost a constant desire to urinate, but was unable to pass more than a few drops at a time. When admitted to Long Island College Hospital her face and limbs were badly swollen (oedematous); urine small in quantity, light in color, specific gravity, 1,009; upon the addition of nitric acid, one-half its bulk coagulated; microscopical examination showed a large quantity of epithelium from the tubes and urinary passages, as well as epithelial and blood casts; upon physical examination of lungs, numerous very fine, moist râles were found, showing oedema of the lungs; she also complained of pain in the chest. At 7 P. M., she was given fifteen minims. fluid extract jaborandi, to be repeated every hour until she should perspire; soon after the first dose she began to perspire, which soon became very profuse; at the same time saliva escaped from the mouth almost continuously; this continued for some hours. On the next day the patient felt a good deal better; no râles; no pain in the chest; repeated the same treatment this evening with like result; also used dry cups over the kidneys and lungs; examined urine, found it light

in color, specific gravity, 1,012; albumen about one-fourth of its bulk; she was put upon the following:

R	Tinc. digitalis.....	℥ij.
	Sal. potassa citratis.....	℥ij.
	Infus. buchu, q. s. ad.....	℥iv.

Sig. Two drams every two hours.

On the ninth day rapidly improving; œdema had entirely disappeared.—*Med and Surg. Reporter, and Nat. Med. Review.*

CHLORAL AS A COUNTER-IRRITANT.—Among the many uses to which chloral has been put, we have not met before with the following from the *Bulletin Therapeutique*: Made into a mass with gum tragacanth, spread on a paper and applied to the skin, it will produce a blister without pain; applied as powder on cotton, it causes a painful burning sensation; by the former method a portion is absorbed and the patient falls asleep. Its action is not so uniform as cantharides, but as a mild visicant or an agreeable revulsion the writer would recommend such chloral paper to physicians, the more so as it will keep for months without losing its activity if well prepared.—*Druggist Circular.* J. M. S.

SURGERY.

CERTAIN ABSCESSSES NEAR THE MARGIN OF THE ANUS.—(Prof. Verneuil, *La France Medical.*)—There exist, you know, two very distinct varieties of abscesses of the anal region. In the one the abscess occupies the ischiorectal region, but the purulent collection occupies the buttock and bulges; here the rectal wall is unaffected and is not laid bare at any point. In the other variety, on the contrary, the pus does not point toward the buttock; there exists only a slight tumefaction, a little redness and heat in this region; the purulent collection has destroyed the perirectal cellular tissue and burrows and points in this direction. In the first variety of abscess the pus has a tendency to find exit in the region of the nates; in the second, it tends to ulcerate through the wall of the rectum and to open into its cavity. From this difference of seat important therapeutic consequences result, and it is my object to lay before you. In the first case a simple incision of four or five centimetres ($1\frac{1}{2}$ to 2 inches) practiced in the direction of the anus, generally suffices for the evacuation of the pus; cicatrization then rapidly follows without leaving any traces of a fistula behind. In the second case, if the rectal wall be bulged or bored, even a larger incision is insufficient, and fistula inevitably occurs (cases in point are here cited, after which he continues). As soon as I find the pus pointing towards the rectum I incise not only the abscess in the

region of the buttock, but I also, and at the same time, do the operation for anal fistula. In these cases I puncture the purulent collection, and introduce a grooved director, which I make to strike the rectal wall so as to bulge and perforate it at a point as far as possible above the part laid bare; I then bring the director out through the anus and divide by means of the thermo-cautery all the bridge of tissue between the two openings. * * * * *

The only objection which can be taken to our procedure is that the operation is a little longer and a little more serious than simple incision, but to that we may reply that the duration of the treatment is ultimately infinitely shorter than with a simple incision.—*Extracted from the Canadian Jour. of Med. Sci.*

[This treatment of perirectal abscess is not new, for Van Buren, in a pamphlet published in 1870, on pages 60 and 61, discusses the question, "whether, with the almost certain result of a fistula in prospect, it would not be better for your patient that you should complete the operation for its cure at once? My experience would lead me to answer this question in the negative. It is the wiser course to simply open the abscess, and take the chance, poor though it be, of its healing. When the indolent sinus shall have formed, all the inflammation having subsided, you will probably secure a more prompt result by operating for the cure of the fistula." I quote thus at length to show that this has been practiced more or less by American surgeons for many years. I have frequently seen the operation performed in the manner described by Prof. Verneuil, and with good results.]

H. H. M.

OBSTETRICS.

A NEW BINDER.—Dr. Vacher in the *Obstetrical Journal* (G. B. I.) calls attention to an "abdominal shield for improving the obstetric binder." He claims that the ordinary appliances, whilst strongly indicated, have fallen into disrepute chiefly through their inefficiency. The Doctor's improvement consists of a "shield" cushioned with rubber air-bags, so constructed as, by means of a spring, to clasp the uterus after the manner of the band externally applied. This is kept in position by an external coursing, such as the ordinary binders with two stays as stiffeners in the rear, to prevent its rolling up from the hips.

DEVELOPMENT OF THE GRAAFIAN FOLLICLES DURING PREGNANCY.—Contrary to the opinion then prevailing and contrary to that now generally taught, the venerable Prof. Chas. D. Meigs used to contend that the development of the Graafian fol-

lices continued uninterruptedly during pregnancy. This opinion has been confirmed by some researches and post mortems made by Dr. Slaviansky, which we find in the *Med. Centralzeitung*, Oct. 30th. A woman of twenty-four years, who died suddenly in the third month of pregnancy, displayed follicles on the point of bursting and recent corpora lutea. This may be said to decide a question of considerable physiological interest.

PENDULOUS UTERUS AT FULL TERM OF PREGNANCY—COMPLETE ANTEVERSION AND ANTEFLEXION.—At a recent meeting of the obstetric section of the New York Academy of Medicine, Dr. Isaac Taylor presented an illustration and gave a history of a case in which there was complete anteversion and anteflexion at the full term of utero-gestation—the uterus covered with the pendulous abdominal walls and hanging between the thighs. This case was the more interesting in consideration of the youth of the patient, who, although multiparous, was only 22 years of age. This was the second case of the kind which Dr. Taylor has seen during a long and large practice.

W. C.

GYNÆCOLOGY.

DISEASES OF WOMEN.—At a recent meeting of the Cincinnati Obstetrical Society Dr. Palmer read a paper on "Tapping of Ovarian Cysts," an abstract of which is as follows:

"What are the results which, from our present standpoint, may be expected from tapping? To what extent do these warrant the continuance of the same?"

He referred to the great variety of opinion expressed by authorities, viz: Boinet, Kiwisch, Atlee, Spencer Wells, McDowell, Simson, Nussbaum, Thomas, Peaslee, Hegar, Spiegelberg, Storer, and Stilling. Only two of these never tap; the remaining ten tap with varying frequency for diagnosis or treatment. Most regard the operation as attended with danger.

He endeavored to answer the above questions by reviewing the objects sought for in the operation, together with the results which may follow.

These are, 1st, diagnosis of the tumor; its nature, character of contents, number of cysts, attachments, etc. Of great importance in some cases, essential in a few. Increasing experience diminishes, however, this necessity.

2d. Palliation. In the vast majority of cases, although, perhaps, gratifying at first, is of short duration, and as a rule very unsatisfactory.

3d. Cure. This effect is most likely to follow tapping in (a)

parovarian cysts; next in (*b*) unilocular cysts of the ovary proper; next in (*c*) paucilocular cysts; and last in (*d*) multilocular cysts. In the first, cure occurs as a rule; in the second and third varieties, it by far more frequently fails, and in the last, failure is certain.

What are the dangers of tapping?

1. Hemorrhage. A possible accident with best care, and whatever trocar. Fatal case occurred in hands of Peaslee; others reported by Spencer Wells and Kiwisch.

2. Shock.

3. Inflammation of the peritoneum. The greatest of all dangers, due in most instances to a passage of cyst-contents into the peritoneal cavity. Peritoneum exceedingly sensitive to presence of foreign substances. The contents of multilocular cysts most injurious.

4. Inflammation of cyst-wall. The result of trauma, entrance of air into its cavity. Takes place more frequently than is supposed.

5. Septicæmia. Stands second in the order of frequency among dangers.

6. Rapid refilling of the cyst, and consequent drain of the general system. Cysts, although unilocular, may refill with surprising rapidity, amounting to several gallons of fluid within a few weeks to a few days. The drain is a source of no inconsiderable danger. A hectic, phthisis, amyloid degeneration of internal organs may follow.

Not a few cases in fair condition for ovariectomy, prior to or soon after a first tapping, have been permitted to become weaker and more exhausted under increasing drain, until a radical operation offers only a forlorn hope.

Mortality of tapping:

Simpson calculated it was not less than 1 in 6.

Dr. Fock's table of 132 cases showed 1 in $5\frac{1}{2}$ cases, in from a few hours to a few days.

Kiwisch's analysis of 130 cases give 17 per cent. of death within a few days.

Southam 20 cases, 4 died within four hours and 3 within first month.

Meigs put mortality at one-half:

T. S. Lee's table, 20 cases. Ten died within seven days, and 2 within two weeks.

Peaslee thinks if statistics were made up from cases in hands of the general practitioner, no better results could be shown than in tables of Fock and Lee. He concludes that the tapping of polycysts is attended by a mortality of at least 50 per cent.

The danger, as experience proves, is not limited to polycysts. Peaslee, a strong advocate for tapping of monocysts, states he has lost 4 such out of 63.

Other proof is abundant.

Aspiration does not diminish these dangers. In the hands of Peaslee, Hegar, Munde, Lusk and others, very serious and fatal results have followed aspiration. Nor is the hypodermic syringe free from danger. These few cases already reported are undoubtedly but a small proportion of those repeatedly happening.

CONCLUSIONS.—In balancing the results for good and bad, it is not difficult to determine which outweighs. For remedial purposes, the ill effects of tapping so greatly preponderate, both in number and degree, that there is no doubt the number who have died within a few days after tapping is so far in excess of those cured by the operation, as to leave a very unfavorable showing for the latter.

Notwithstanding, however, the risk of the operation is heavy, and the ultimate permanent good promised is small, the urgency for immediate relief may be so great as to render it justifiable. Life may be held in extreme jeopardy from the dyspnoea, pain, vomiting, and urinary suppression—the effect of pressure of a developing cyst. Unless relief is speedy, the patient dies; she is, however, too feeble to render ovariectomy at all advisable. Better tap for its immediate effect, in hope the patient may rally, and a future condition be more favorable for the removal of the cyst.

Aside from tapping in the very few such cases, it should be limited, with a view to remedial effects, for obvious reasons, to well-defined parovarian cysts. Here the danger is at a minimum, the prospects of permanent benefit at a maximum. But in view of the fact that a vast majority of tapplings even in monocysts prove unsuccessful as to cure, and may, regardless of the method of puncture employed, be fatal, the operation, save under the above rare exceptions and conditions, should be abandoned. And in view of the greatly increased danger of puncture of polycysts, the observance of this rule with them is more urgent, and should be more rigid.

For the purpose of diagnosis, the line of duty of the operator, from our present standpoint of facts, is equally clear and well defined. Is one justified in incurring the risk attending tapping for the sake of diagnosis? He must know, if he has acquainted himself with the literature of this subject, that he may bar himself the privilege of affording the only hope of his patient's recovery—ovariectomy. To endanger life, it may be unnecessarily, and deprive that life of the only chance for a restoration to health, is a fearful responsibility.

Past experience clearly should influence the surgeon to limit tapping, for the purpose of diagnosis, to the smallest number of cases, and then only under the circumstances of imperative necessity, by reason of special obscurity in diagnosis. If the diagnosis is reasonably clear and certain, tapping is unnecessary and unjustifiable. If practiced by reason of doubt, and such a cir-

cumstance may render it permissible, it should be with the full understanding that on the first appearance of symptoms of mischief, the final operation is to be proceeded with. For this, previous preparation is to be made, that no delay is had. Peaslee offers this prudent advice. This is the only safe course of conduct with monoceysts. With polyceysts, however, it is hazardous to wait for the appearance of unfavorable symptoms. Since these symptoms occur in the majority of cases of first tapplings of this variety of cysts, and according to statistics are followed by fatal termination in fifty per cent., there should be no delay. As soon as the character of the polyceysts is determined by a withdrawal and examination of the fluid, and conduct of the cyst remaining, the whole tumor should be removed. The two OPERATIONS ARE ONE and at THE SAME TIME.

Ovariectomy has quite frequently been performed while co-existing inflammation of the peritoneum and cyst following tapping was progressing. While such conditions materially increase the mortality of the operation, they by no means render it hopeless. Successful cases have happened in the hands of Spencer, Wells, Keith, Thomas, Peaslee, Emmett and Goodell.

In conclusion, the life of not a few suffering women, hopelessly doomed save for ovariectomy, is best promoted by limiting tapping to a minimum, and then only for the strongest reasons."—*American Journal of Obstetrics*, October, 1878.

[MECHANICAL SUPPORT OF THE UTERUS.—Dr. Thomas Addis Emmet, Surgeon to the Women's Hospital of the State of New York, in his original and able paper, entitled the "Philosophy of Uterine Disease," speaks thus of mechanical means for the relief of uterine displacements. This paper of Dr. Emmet, published in the *New York Medical Record*, is replete with useful information. We extract these paragraphs on mechanical support, as especially practical and eminently true. It is valuable testimony from a high authority, concerning a remedial measure, in the use of which there is no well settled policy, and much conflict of opinion:]

"We will now consider briefly the mechanical means to be resorted to for the relief of displacements. I am ignorant of any instrumental means, safe or reliable, for correcting the position of an anteverted uterus. Great relief may sometimes be obtained, on increasing the degree of anteversion, by the use of a pessary with a long enough curve in the posterior *cul-de-sac* to lift the neck of the organ from the floor of the pelvis. On thus slinging the organ, as it were, with the fundus resting against the pubis and the cervix elevation, the circulation will be improved, and the irritability of the bladder lessened. We gain time by this means, and enable the patient to take more exercise, since we break the force or jar which would be otherwise transmitted to the organ so long as the cervix rested on the floor of the pelvis. The various devices for forcing the

uterus into an upright position to a point which the organ likely never occupied even when in a healthy state, are faulty in theory and wrong in practice. If we can lift, by any appliance, the uterus to a point where the obstructed venous circulation can be relieved through the neighboring tissues, which have been put on the stretch by the sagging organ, it is all that can be accomplished by such means, and the mere anteversion is of no consequence. Any instrument making direct pressure on the anterior wall, the chief seat of disease and the point of greatest tenderness, must prove a source of irritation. I deprecate even more the intra uterine stem-pessary, for, had this instrument been the device of the Evil One himself, its use could not be productive of more danger. Its use in a flexure seems as rational as would be the introduction of a straight steel sound into the urethra for the relief of an existing chordee; the penis might be straightened by force, but the cause of difficulty would certainly not be removed. The treatment of retroversion of the uterus is more satisfactory, mechanical means can be better applied, and the good resulting from relieving the obstructed circulation is well marked on restoring the organ to its natural position. A recent case of retroversion can be reduced with comparative ease, and an instrument can readily be adjusted which will keep the organ so far anteverted as to render it difficult for it to return to its former position. If, however, the displacement has been of long duration and the uterus has become flexed, the condition will, in all probability, have acted as a source of irritation in causing cellulitis to a greater or lesser extent. Even should adhesions not have formed, a degree of congestion will have been kept up so as to require but a slight provocation to establish a fresh attack of inflammation. It is, therefore, wise to proceed with the greatest caution in any attempt at reduction until we have fully appreciated the condition. Should we find the uterus firmly bound down by adhesions, it can be replaced in time, for with care, patience, and good judgment, in not attempting too much in a single effort, these bands will gradually become so stretched and attenuated as to offer no longer any resistance. The utero-sacral ligaments, in a state of health, are scarcely worthy of note, being formed but of a reduplication of the peritoneum and a little cellular tissue. These, however, become frequently thickened, and having closed partially over an enlarged and retroverted uterus, can be readily mistaken for adhesions, in consequence of the obstacle they sometimes present in an attempt to restore this organ to its normal position. I have long accustomed myself to rely on the index-finger for the reduction of this displacement, and with a little practice it becomes the most reliable means we can employ. It is one certainly attended with the least risk, as we are able to appreciate at once the point and extent of resistance. When we have once ascertained

the fact that there are no adhesions nor lurking inflammation in the neighboring cellular tissue, an experienced operator may, with comparative safety, use the sound or any other means to which he has been accustomed. But the method which I will describe is attended with less pain, and I believe with the least danger, under all circumstances. The patient is to be placed on the back, with the knees flexed, and the hips drawn down to the edge of the operating table or chair. Introduce then the index finger into the vagina, and direct the point of a tenaculum, which is to be hooked into the posterior lip, just within the os. This instrument is to be used for the purpose of gently drawing forward the organ, sufficiently toward the vaginal outlet, that we may be satisfied the fundus is distant enough from the hollow of the sacrum to pass the promontory when elevated. At the first attempt this must be done with care, and if a point is reached at which great pain is caused, we must then desist. By this manœuver the uterus has, of course, become more retroverted than before. To correct this, the perineum should be pressed firmly back, that the finger in the vagina may be passed as far up behind the uterus as possible, and made at the same time to lift up the organ. When the uterus has been thus elevated, and while it is being held up by the finger, the cervix is suddenly carried in an arc of a circle, downward and backward, by means of the tenaculum held in the other hand. By aid of the finger in the vagina, the fundus has been pressed up against the utero-sacral ligaments. These ligaments, having been put slightly on the stretch, gape as the tension is suddenly relaxed by carrying the cervix backward, and the fundus slips between them. The finger must be then placed against the anterior lip, the tenaculum withdrawn, and the organ anteverted by passing the finger repeatedly down the anterior face of the uterus, so as to press the cervix downward and backward into the hollow of the sacrum. If an unusual degree of pain is experienced at any point, we must use our judgment as to how far it may be safe to proceed, or desist entirely for the time being, until all active symptoms have subsided under the proper treatment. When successful, I frequently make no attempt, by mechanical means, to hold the uterus in position, until I have again replaced it and satisfied myself that no tenderness on pressure exists at any point which would come in contact with the pessary to be used. The form of the instrument should be adapted to carry the cervix well back, and with a sufficient curve in the posterior *cul-de-sac* to keep it elevated, so that the organ must remain anteverted. I have been consulted, more than on any other point, as to the best form of pessary to be used in practice. A difficult question to answer, as there is some individual peculiarity about nearly every case, on the appreciation of which to a great extent success will depend. Some modification of Hodge's closed lever pessary, however, will be found applicable to the largest number

of cases, as it conforms more than any other to the natural shape of the vagina. A pessary, to do no harm, should be small enough to admit of the passage of the finger between it and the vaginal wall at every point, while the patient lies on the back.

It must be just large enough to give the needed support to the uterus, and be at the same time small enough for the vagina to regain gradually its natural size. The elasticity of the canal is sufficient to admit of a dilatation to the extent of the pelvic excavation; but it will prove an exception to the rule if a pessary, properly curved, need ever be over three inches in length and an inch and a-half in width. Whenever it is possible to avoid making the pubis the chief point of support, I do so. But it is often unavoidable in cases of long standing retroversion, where the anterior wall of the vagina has become shortened in consequence, and in cases of prolapse of the posterior wall, from laceration of the perineum. But where the vaginal outlet is not too large, and the posterior *cul-de-sac* is of a natural depth, the principle of the lever-pessary is applicable to nearly all cases. The fulcrum of this double lever rests on the posterior wall of the vagina at the bottom of the *cul-de-sac*. It should be so curved in reference to this *cul-de-sac* and posterior wall at one extremity, and at the other end bent with a lesser curve in the opposite direction, so that the instrument may be balanced. As the patient stands on her feet, the weight of the uterus will cause the other end of the instrument to rest against the anterior wall of the vagina, near the neck of the bladder. On assuming the horizontal position, the instrument will present in the axis of the vagina near the outlet. It will thus compensate itself by a change of position, so that it cannot, from continued pressure at one point, cut into the vaginal tissues. A longer curve will be needed in the *cul-de-sac* where retroversion has existed, than with prolapse from hypertrophy, where the object is simply to lift the organ from the floor of the pelvis. In the latter condition, the upper portion of the vagina will be more dilated, as a rule, than the lower part, and the instrument must be made to correspond. The closing in of the vaginal walls around an instrument, made larger above, has the effect of crowding it upwards in the canal. When even the outlet is larger than natural, and dilated from a prolapse of the vaginal walls, we must restore the canal to a natural size and close the laceration through the perineum, by a surgical operation, before an instrument can be worn with advantage for correcting the retroversion. An instrument, under the circumstances, to be used as a temporary means of relief, must be made wider below, with the greater curve also at this point, so as to get the needed support from behind the pubis, and with a depression to guard the neck of the bladder from pressure. We find occasionally a difference in the curve on each side of the symphysis, so that, if an instrument is made symmetrical, it will bury and cut into the

soft parts covering the lesser curve. On the corners of the instrument there should be no sharp angles, but a gradual curve; frequently it is necessary to bend the corners downward, to correspond with the roof of the vagina at this point. In the posterior *cul-de-sac* the instrument should never be so abruptly curved as to make pressure directly against the uterus at its junction with the vagina, but at some little distance beyond. The circulation in the neck is easily obstructed by pressure at this point, so that it will soon cause an erosion about the os; and frequently an intolerance to the presence of any instrument in the *cul-de-sac* becomes established, in consequence of irritation or inflammation of the lymphatic glands found in this neighborhood.

The shorter the vagina, the straighter must the instrument be made, for if curved too much it will rotate and remain across the axis of the canal. A straight instrument has to be wider in the middle, in proportion to its length, than a curved one. The widest part of the vagina is from one sulcus to the other, while the lateral walls and posterior surface of the canal form a concavity; consequently, a curved instrument should be made rather smaller in the middle, as its support is chiefly derived from the posterior wall. It is a very common occurrence to find an instrument, when too wide, cutting its way along the lateral walls of the vagina, at the bottom of a deep fold formed as the pessary is carried downward from the pressure above. It may be accepted as a rule that, so long as a patient can recognize from her feelings that she is wearing an instrument, it either does not fit, or she is in no condition to wear one; and in either case it will do her harm. So soon as an instrument has been properly adjusted, and there is no tenderness on pressure at any point in the vagina coming in contact with it, the patient will be unconscious of its presence. I prefer at first the use of block tin rings, on account of their greater malleability. After modeling one of a proper size to the case, and having fairly tested its use, I then have the instrument reproduced in aluminium, silver gilt, or hard rubber. These are, in brief, the main points to be observed in adjusting a pessary properly, but in each case there will be a necessity for some modification in consequence of individual peculiarities. Success will depend entirely on an accurate appreciation of these differences, and on the mechanical skill innate to the operator. To a want of both or of either gift, must be attributed the unsatisfactory results so often complained of.

THE OXALATE OF CERIUM IN PREGNANT SICKNESS.—Dr. Francis Edward Image writes to the *Practitioner*: Sir James Simpson introduced the oxalate of cerium and prescribed it in ten grain doses. The official dose is from one to two grains, which is, as a rule, so useless that the preparation has been stigmatized as the "oxalate of mud." As a general practitioner of several years' standing, very many cases of pregnant sickness have naturally

come under my care, and up to the present time I have not met with a case in which the nausea has not been very considerably relieved, and in most cases completely checked, by ten-grain doses of the oxalate of cerium. I have at the time of writing this a lady under my care who, from the fourth week of her pregnancy till now, the eighth month, has suffered at intervals from this distressing symptom, but whose sickness has been invariably checked by from two to three days' administration of the oxalate in the dose I have mentioned. In severe cases I give it every four hours for the first day, beginning the first dose half an hour before the patient rises, and then, as improvement takes place, diminishing it to three times a day, but always giving the first dose of the day before the patient moves from the horizontal position—a point to which I attach much importance. The formula I employ is—

R.	Cerii oxalatis.....	grs. x.
	Pulv. trag. co.....	grs. x.
	Tre. aurantii.....	ʒ ss.
	Aquam. ad.....	ʒvj.

In Dr. Frowert's case he prescribed $1\frac{1}{2}$ grain doses, which were not "followed by the slightest remission of symptoms." I hold that this want of good result was from the insufficiency of the dose.

The oxalate of cerium I have also found most efficacious in restraining the nausea resulting from uterine irritation. I generally combine it with bromide of potash in these cases, but have found it to succeed in combination where the previous employment of the latter drug by itself has been without appreciable effect.—*Canada Med. Rec.*

OVARIOTOMY DURING PREGNANCY.—The author, (Heywood Smith, M. A., M. D.,) narrated the case of a woman, aged 25, pregnant with her fourth child, the subject of an ovarian cyst, noticed after her previous confinement seven months before, who came under his notice on March 25th, 1878. He removed the tumor antiseptically on June 12th, the patient then being about four and a-half months pregnant. The adhesions were strong to the abdominal walls. The pedicle was tied with silk; and she left the hospital in twenty-eight days, the pregnancy not being disturbed. The temperature never rose above 99.8° Fahr. He justified the operation by the consideration that, with any other method, whether by letting it alone, or tapping, or the induction of premature labor, the cyst would still be left to be dealt with, and there would have still been risk of miscarriage; and also by the fact that Spencer Wells' statistics of ovariectomy, during pregnancy, had given such good results. His prognosis was verified by the favorable issue.—Mr. E. Smith (Bolton) did not consider the patient would be worse off if she aborted, had the operation not been performed.—Dr. Griffith (Swansea) wanted to know if it

were conjunctive that cysts burst during labor; and asked what was the risk of allowing the patient to go her full time. He drew attention to the frequency with which patients menstruated eight or nine days after ovariectomy.—Dr. Marion Sims said that his second case of ovariectomy was pregnant three months.—Dr. H. Smith, in reply, said that the so-called menstruation arose from a general hyperæmic condition—from the super-abundant energy of the circulation that had, before the operation, been utilized in supplying the tumor with blood; and that, on the removal of the tumor, the heart did not all at once accommodate its work to the lessened range. Hence also arose the albuminuria and the presence of urates on the third day after ovariectomy. He considered in his case, as the tumor was large and growing, that there was less risk to the patient from the operation than if she had been allowed to go her full time.—*Hosp. Gaz.*

IMPREGNATION OCCURRING WITHOUT INTRODUCTION OF THE INTRODUCING ORGAN.—Dr. Chas. Roth, in *Medical Record* of 30th November, reports a case where sexual intercourse was impossible because of an excruciating vaginismus. In the attempt at coition the semen was discharged on the external genitals, the spermatozoa found their way into their natural destination, and pregnancy occurred. This case is important in a medico-legal point of view.—*Louisville Med. News.*

A DICEPHALUS MONSTER.—It will be remembered that some months since it was announced that a double female monster of the dicephalus type had been born near Montreal, in Canada. This remarkable monstrosity has been recently on exhibition in New York, and excited much interest among the profession. It is known as the "St. Benoit Twins." The twins are called Rosa and Mary, and they are now seven months old. They have two perfectly formed and natural heads, and two bodies also as far as the last rib, but below that both are fused into one. They have four arms, only two legs, and each child has the control of but one of them. As far as the natural functions of life are concerned, each is almost entirely separated from the other, and one may be sleeping while the other is laughing, crying or nursing. They have but one abdomen, one umbilicus, one vagina and one rectum; although the stomachs, and some, at least, of the other abdominal viscera seem to be separate. There was no physician, and not even a professional midwife in attendance; only an ordinary female friend, assisted by the mother, were present at the confinement. One of the heads presented first, and after that was delivered, the body belonging to it followed. Next came the body of the second child, with two legs doubled up alongside of it, and finally the head of the second child. They are now really fine-looking children, and apparently perfectly healthy, although one of them seems to be somewhat larger and better developed than the other.—*Extract from letter in Boston Journal.*

W. L. B

THERAPEUTICS.

COPAIBA IN CIRRHOSIS AND JAUNDICE.—The value of copaiba as a diuretic and cholagogue is not sufficiently appreciated. The following case, reported in the *British Medical Journal*, by Dr. B. J. Massiah, illustrates it: W. D., aged 37, a clerk, was a spirit drinker for four years, seven years ago, and during the last four years and a-half has had three prolonged and painful attacks of jaundice, with ascites and œdema of lower limbs. On admission, three months ago, he was tawny, thin, rather weak. He complained of constant pain in the umbilical and lumbar regions. His fluctuating abdomen measured thirty-four inches in circumference, and the vertical hepatic dullness in the nipple-line was three inches. The urine was scanty, bilious, and exalbuminous.

During the first month he took bitartrate of potash and compound jalap powder; and the abdomen increased two inches, the urine remaining scanty. Then, under a scruple of copaiba thrice daily, it rose on successive days, from one pint in twenty-four hours to three, four and five pints; while the ascites began to subside. Once, for a fortnight, he took half a dram of tincture of belladonna thrice daily, for the abdominal pain, and the quantity of urine fell below two pints daily. Since then, he has returned to the copaiba, and his urine has averaged three or four pints daily. The abdomen now measures thirty-three inches in circumference, and his general health is much improved.—*Med. and Surg. Reporter*.

STRYCHNIA—ITS ANATOMICAL AND ITS PHYSIOLOGICAL EFFECTS UPON THE BRAIN, SPINAL CORD AND NERVES.—Dr. W. H. Klapp (*Journal of Nervous Diseases*, October, 1878) details at length some very elaborate experiments made upon the above topic. The care and skill exhibited lead us to the belief that his conclusions are approximately correct. They are: (1) Strychnia produces no appreciable primary lesion of nerve substance proper; that secondary lesions are produced—granular degeneration—by the engorgement of the vascular system, and that this is more marked in the brain and cord than in the nerves. (2) The convulsions of strychnia are not cerebral, and they are much more severe after the ablation of the cerebrum owing to the removal of Setschenow's ganglia. (3) Strychnia does not affect either the sensory or motor nerves at their periphery. (4) Both sensory and motor nerves in their course are unaffected by strychnia. (5) The tetanus-producing power of strychnia has its only action in the gray matter of the spinal cord. (6) In small doses the primary action of strychnia is to excite the vaso-motor center, causing thus a rise in the arterial pressure, and secondarily to paralyze this center, and hence to supplement this rise by a fall. (7) In large doses the vaso-motor center is immediately

paralyzed. (8) The slowing of the pulse produced by the exhibition of strychnia to both warm and cold-blooded animals is in neither case produced by any action on the central or peripheral ends of the pneumogastrics; but in warm-blooded animals is due to action on the excito-motor ganglia of the heart, and in cold-blooded animals is due to action on the ganglia situated in the sinus venosus. (9) The main vaso-motor center for strychnia is situated in the medulla oblongata, but simpler centers exist in the spinal cord. (10) The pneumogastric nerves are *not* paralyzed by strychnia in either warm or cold-blooded animals. (11) Strychnia decreases the number of respiratory movements; at first from too little blood, and afterwards from too much blood flowing to the respiratory centers. (12) The decrease is not due to any action of the pneumogastrics. (13) Artificial respiration always moderates and sometimes stops the spasms; and this power is due to a maintenance of the oxygenation of the blood until the poison can be eliminated, and is not due to a reflex stimulation of the pneumogastrics.—*Detroit Lan.*

THYMOL AND ITS USES.—As an antiseptic, thymol is much more powerful than phenol or cresol (carbolic acid). Ranke uses a solution of one part thymol to one thousand parts water, instead of the carbolic solution of Lister. Dr. B. Kussner, of Halle, has tried it internally. In doses of three to five drops of a one per cent. solution he found it useful in the diarrhœa of children. An inhalation of one part to one thousand of water reduced the fever and expectoration in a phthisical case.

Animals poisoned with thymol sink into a profound coma. After death their blood is dark and fluid. Fatty degeneration of internal organs is, however, not found. Injected into the veins it lowers the temperature and induces stupor.—*Med. Surg. Rep.* J. S. B. A.

DISEASES OF THE NERVOUS SYSTEM.

WESTPHAL'S DIAGNOSTIC POINT IN LOCOMOTOR ATAXIA.—Prof. Westphal about a year ago asserted that he had discovered a pathognomonic sign of sclerosis of the posterior columns. It is a very simple one. When in health, sitting with one knee across the other and the foot of the uppermost leg freely suspended, it is well-known that a smart tap with a narrow instrument, such as a ruler, delivered on the tendon of the quadriceps, just below the patella, will cause the foot and lower leg to spring up with a jerk. Well, Dr. Westphal maintained that this jerk does not oc-

cur in posterior sclerosis, and that its absence is a sure sign of the presence of that formidable disease.

His conclusions were attacked by several observers at the last meeting of the British Medical Association; and it seems pretty clear that his statement requires modification. No doubt the absence of this involuntary act is a significant sign of some important organic change. A new study of it has been made by Dr. S. Tschirjew in the *Archiv fur Psychiatrie*, and with great accuracy. The clinical result he reaches is that the absence of the reflex motion in man points to degeneration of the posterior spinal roots and columns at the level of the third and fourth roots of the crural plexus; but that in degeneration of the columns which does not reach so low as this the reflex phenomenon may appear. This very interesting result vindicates the symptom as of great importance.—*Med. Surg. Rep.*

CURARE IN EPILEPSY.—In the opinion of Kunze we possess in curare a remedy by means of which we may cure cases of epilepsy of long standing. He employs a solution of seven grains of curare in seventy-five minims of water, to which he adds two drops of hydrochloric acid. At intervals of about a week he injects beneath the skin eight drops of this solution, and in various cases in which convulsions had occurred for several years, he obtained a complete cure after eight or ten injections.—*Canada Med. Rec.*

URTICARIA.—BISULPHITE OF SODA.—Dr. Carter, Mt. Jackson, Ind., states that the hypodermic injection of a saturated solution of bisulphite of soda in urticaria is the most prompt remedy in relieving this troublesome affection he has yet tried. It appears to act upon the periphery of the cutaneous nerves as does belladonna, except that the latter has a heating and the former a cooling effect.—*Med. Brief.*

TREATMENT OF SEVERE BED-SORES.—Dr. Dyce Duckworth (*Archiv. Dermatology*) communicated to the Am. Derm. Ass. meeting of 1877, a short paper on this subject. He recommends that, in addition to the use of the water-bed, the patient should lie with the buttocks and sacrum constantly upon poultices. These should be made of linseed, and if there be much discharge or fœtor, the cataplasma carbonis should be used. They should be made of pure linseed, and frequently changed. They must be large and secured in position by a binding sheet secured over the abdomen by safety-pins. The balsam of Peru should be added if there is deep excavation and sloughing.—*Am. Med. Bi-Weekly.*
C. W. S.

Dr. THOS. KENNABD, of this city, contributed to the *New Orleans Medical and Surgical Journal*, for October 1878, an interesting article on the subject of sunstroke, based mainly on last summer's epidemic in St. Louis, from which we make the following extracts: The heated terms of 1878 began suddenly, on July the 10th, and continued without much abatement for ten days, during which period the total mortality from all diseases was 499, of which number 154, or about 31 per cent., was caused by coup-de-soleil. Of this number 115 were males and 39 females; 147 white and 7 negroes. There were four deaths under 15 years of age; 18 from 15 to 30 years; 65 from 30 to 45 years; 38 from 45 to 60 years; 29 about 60 years.

The deaths occurred as follows: July 10th, 2; 11th, 3; 12th, none; 13th, 13; 14th, 12; 15th, 41; 16th, 22; 17th, 23; 18th, 17; 19th, 15; 20th, 6. The nationalities were: Germany, 62; United States, 36; Ireland, 30; England, 6; others countries, 10.

This gives Germany 40 per cent. of the whole mortality, and about the correct proportion for the number of Germans belonging to our working population.

Many other deaths during this period were also due to the extreme heat, though not from sunstroke. There were 50 from cholera infantum; 17 from apoplexy! 40 from convulsions and 34 from other diseases of the brain and nervous system.

Two hundred and ninety cases were treated for heat exhaustion at the City Dispensary, among whom were eight colored persons. Five died at the Dispensary and 165 were transferred to the City Hospital, at which institution 112 cases in all were treated and only nine died.

Since that period there has been a gradual increase in the temperature and a number of cases of sunstroke have been reported, as also an increased number from the indirect effect of solar heat. During the week ending August 10th we had 2 deaths from sunstroke, 13 from convulsions and 9 from other diseases of the brain and nervous system. During the week ending on the 17th, there were several cases of heat exhaustion, but no deaths; and the mortality was unusually small (119) or a death rate of only 12.37 to 1000 inhabitants.

Nervous exhaustion from exposure to an excessive degree of heat is the true meaning of sunstroke.

To maintain health, it is absolutely necessary to keep the temperature of the blood as nearly as possible at its normal degree. It cannot rise but very little above one hundred without producing fever and exhaustion, nor can it fall much below that point without causing chilliness and disease. In the severest fevers the over-heated blood will paralyze the nervous system and cause death generally before it reaches 108°, because such a temperature is incompatible with life.

After the commencement of an epidemic, many deaths occur on cloudy days in the shade, where the temperature does not

range very high. Persons debilitated by age, and worn out from greivous sickness are often overcome by heat, when they have not been exposed to the sun's rays at all, which proves that death is due to nervous exhaustion from the heat and not to insulation.

The belief that a high humidity of the atmosphere is an essential condition for the production of sunstroke, has not been confirmed by experience and extended observations, and although many cases that have occurred indoors where the atmosphere was very moist, but the temperature not excessive, naturally inclined us to that opinion, it has been fully demonstrated that excessive and continued heat without regard to moisture is the one essential cause.

The temperature during this period, taken from Mr. A. S. Aloe's standard thermometer, at his instrument store on the corner of Fourth and Olive streets, accurately indicated the degree of heat on the ground floor:

	S A. M.	12 M.	3 P. M.	6 P. M.
July 10th,	84°	92°	96°	91°
" 11th,	83°	92°	96°	93°
" 12th,	85°	92°	98°	92°
" 13th,	88°	93°	98°	95°
" 15th,	86°	94°	99°	97°
" 16th,	86°	93°	100°	97°
" 17th,	87°	95°	99°	96°
" 18th,	86°	94°	99°	97°
" 19th,	85°	93°	97°	91°
" 20th,	84°	93°	97°	91°

Dr. Geo. Engelmann, who has made accurate meteorological observations in our city for the past forty-seven years, states in his reports for 1855, that the two great features of the climatic condition of 1854—the heat and dryness—were almost reversed in 1855.

The mean annual temperature had only been lower in 1835, 1838 and 1843. In June it was cooler than he had ever observed it in 23 years. July and August had an average temperature. September showed an unusually warm and steady one. From what we have written, then, it appears that neither an intensely dry heat, nor any marked increase in the humidity and closeness of the atmosphere is requisite for the production of heat-exhaustion. *Only an uninterrupted continuance of high temperature is necessary*, and the reason why we suffer so grievously in St. Louis during a heated term, is that we have at such times no cessation to the heat, no night breezes to cool the atmosphere and induce refreshing sleep. The still and torrid heat banishes sleep, and we tumble and toss about all night, and are more wearied and worn out in the morning than when we retired.

During the last four days of June, and in the first five of July, 1854, fifty-three deaths occurred in St. Louis from sun-stroke, when the mean temperature of these nine days was only 86°. During the same year and the same month, another period of nine days occurred when the average temperature was 88°, and yet only seventeen deaths were reported from the effects of heat, and stranger still, on the 5th of July, with the thermometer giving a mean temperature of 79°, five deaths took place. *Disordered innervation is the prominent symptom, which is due to a previous disordered condition of the blood by being over-heated.* There is always great thirst. If these conditions be not rapidly relieved we will have vertigo, an increase of the hallucinations, wildness of speech, incoherency of thought, a species of hysterical mania, and sometimes convulsions, terminating in death.

SOME OF THE THERAPEUTICAL USES OF ALCOHOL.—Dr. G. Timins, in the *Medical Press and Circular*, says, on this subject: To dilate the arterial system is the chief therapeutical use of alcohol, as well as its most important physiological action. By relaxing arterial contraction the circulation is immediately modified. The greater proportion of the blood being in the arteries, the whole venous system is relieved, less blood is sent to the lungs, less force required in the heart, and the circulation for the time made easier. Coldness of surface, lividity of complexion, oppressed respiration, and feeble or laboring action of the heart (collapse) are accompaniments and symptoms of a preponderance of blood in the venous system, and are indications for the use of alcohol. In sudden cases of collapse, if the patient cannot swallow he should be made to inhale ether by the clothing about his nose and mouth being saturated by that substance. Then diluted alcohol may be injected into the bowel.

Local passive congestion, so frequent and dangerous in the course of debilitating diseases and of convalescence, requires local treatment, but this will be much aided by, and often unsuccessful without, the cautious administration of alcohol.

In pneumonia, intercurrent or sequent of fever, the exanthems, severe injuries and operations, general blood-letting and antimony are inadmissible, and aconite is dangerous. In such cases alcohol, given to the amount of half an ounce of proof spirit (for an adult) every three or four hours, will be found a useful help to local derivation. Also, after the subsidence of a sharp attack of pneumonia in the healthy, when the diet requires most careful watching, and the return to ordinary food to be made most gradual, the advantage of saline expectorants will be much increased by alternating them with moderate doses of alcohol.

In fever, snake bite, and other states in which the powers of life seem oppressed by blood poisoning, the free use of alcohol, by antagonizing venous congestion, gives time for curative measures to be employed.

On the other hand in all inflammations, except during the stage of collapse, and in pneumonia, which is rather an active venous congestion than an inflammation, in all inflammations in the active stage, the use of alcohol is contraindicated. Indeed, if there were such a remedy, a drug which acted in the directly contrary way to alcohol, one producing a preponderance of blood in the veins, would be indicated in inflammation.—*Med. Surg. Rep.*

Dr. HAMMOND, a reputed expert on insanity, an extensive writer on the subject, at one time surgeon-general of the United States army, and now associate of the *Journal of Nervous and Mental Diseases*, said recently, in a discussion which took place on this subject at a meeting of the Medico-Legal Society of New York, "that he is in favor of punishing insane people just as he would a tiger who went about destroying people. If a lunatic had a homicidal mania, he would hang him." He would not only hang any and all insane people who killed any one, but he would hang them if they had a mania to kill, even were that deed not performed. This would be an effectual way to make vacancies in our asylums, and would remove perplexing problems from our courts of law to the scaffold and the grave. I am sure such a brutal idea will never prevail where humanity exists. One of the theories of the transmigration of souls was that some one died when each mortal was born, and the soul of the dead one was immediately translated to the new-born child. I am afraid no one died when Dr. Hammond was born. I take this charitable view of the author of such a horrible proposal.—*Dr. Daniel Clark, in Canada Lancet.*

CAMPBOR AS A HYPNOTIC.—Wittich has repeatedly administered camphor to relieve the insomnia which accompanies certain forms of mania, hysterical insanity, and hypochondria. He has found that under such conditions camphor acts much better than chloral, morphine, or bromide of potassium. He administers it by hypodermic injection. He dissolves it in olive oil, and the dose which he recommends is from one to one and a quarter grains. Small doses are more certain to produce sleep than large doses. The sedative effect, as a rule, appears rapidly, and the sleep produced lasts several hours. The injection is to be repeated when the restlessness reappears.—*Jour. de Med. de Bordeaux.*

A NEW NERVE.—In a communication to the French Academy, Cyon claims that the eighth pair of cerebral nerves contain two nerves of entirely distinct senses—the auditory and the nerve of space ("Raumnerf"). He considers the latter the source of all our ideas of extension, and of the three dimensions of space.—*The Doctor.*

C. H. H.

PHYSIOLOGY.

FOOD AND HEALTH.—*Sanitary Journal*: It will astonish most men to find out just how little food, compared with their usual habits, is actually necessary to sustain life at its maximum. Dr. T. L. Nickols, of Malvern, England, has recently been lecturing in London, and giving the results of experiments upon himself, with a view to determining this important question. During the first week he lived on bread and its equivalents (wheat meal, oat meal, rice, etc.), milk, fruit, and vegetables; he ate no flesh meat. His habits of life were regular, his excess being that of overwork. The total weight of ingesta (solid) for the first week was three pounds nine ounces, being a daily average of eight and three-fourths ounces. The second week he ate "food of health," milk and fruit; total weight, four pounds four and a-half ounces, a daily average of nine and three-fourths ounces. He reports that at the end of the second week nothing could be better physiologically than the effect of the diet upon him. His digestion was perfect, and the actions of all the various organs were as good as it was possible to desire. During the third week he discontinued milk as unnecessary, and took of solid food three pounds two ounces, an average of seven and a seventh ounces per day. The fourth week his food, being similar, weighed three pounds six ounces, a daily average of eight ounces. He now added soups, puddings, eggs, etc., and the fifth week his food weighed three pounds twelve and a-half ounces. For the sixth week it weighed three pounds fifteen ounces, or nine ounces per day. He had taken this diet without stimulants, and had experienced constant increase of health and strength and power to work, and his weight had remained at about one hundred and seventy pounds. He concluded his lecture with the following sentiments: "The diet question is at the root of disease. Pure blood can only be made of pure food in proper quantity. Proper attention to diet would reduce the rate of infant mortality and remove many diseases. If the drink of a nation were pure and free from stimulating qualities, and the food were also pure, the result would be pure health."—*Louisville Med. News*.

THE NUMBER OF BLOOD CORPUSCLES.—Bouchul made a series of examinations of the blood corpuscles in adults and children, in their normal health and under pathological conditions. The following resumé of his work is taken from the *Centralblatt für Chirurgie*, No. 25, 1878: 1. In childhood the number of both red and white blood corpuscles is relatively greater than at any other time. 2. In youth the sex has no influence upon the number of red corpuscles. 3. Later in life, in persons of equal age and conditions of health, the female has the smaller number of red corpuscles. 4. Repeated enumerations in the same individual yield the same results. 5. Blood taken from different portions

of the body does not differ in constitution. 6. The number of red corpuscles bears no relation to the constitution or the condition of health of the individual. From which it follows that a simple counting of the corpuscles is a very incomplete and unsatisfactory examination of blood. The quality of the blood depends, not upon the number of corpuscles but upon their constitution, their dimensions, but above all, quantity of hæmoglobin. 7. The question of numbers is of more importance in the case of the white corpuscles, particularly in the lymphatic constitution. The influence of males is very questionable. The average number of red blood corpuscles in the adults will not exceed 4,000,000 (in each cubic millimetre); that of the white 6,000-7,000; the proportion is therefore about 1:700.—*Cin. Lancet.*

ON SUPERNUMERARY BREASTS.—The following are the conclusions which Dr. Godfrain arrives at, in a carefully worked out thesis upon this subject. (1) Supernumerary breasts are rare. (2) They are of the same structure as the normal breast. (3) They are met with most frequently two in number, less often one, and rarely three. (4) Their most common seat is the axilla, and this site is explained by the frequent existence of axillary prolongations of the gland. (5) Some of the supernumerary breasts have, as points of departure, a pediculization, and a migration of the glandular lobules—analogueous to the migratory tumors of the breast. (6) These supernumerary breasts may exist with or without nipples, and in the former case the milk secreted resembles that of the normal breast. (7) The above characters of the supernumerary breasts enable us to distinguish them from tumors; but in some cases, in which consecutive alterations take place, their diagnosis may become very difficult, or even impossible.—*Phil. Med. and Surg. Rep.*

RESEARCHES ON THE ACID OF THE GASTRIC JUICE.—Ch. Richet has examined the gastric juice of the dog fish and other carnivorous fishes. The digestive agent of these animals is not a fluid, but a slimy, coherent material, scarcely miscible with water, which, under the microscope, consists of an amorphous substance, with scattered epithelial cells. When a large quantity of water is added to it, it dissolves, and may be filtered. It contains more free acid than the gastric juice of mammals, the quantity estimated as hydrochloric acid amounting to even 10 or 15 per 1000. The bases contained in the juice are not sufficient to salinate the hydrochloric acid, which agrees with Schmidt's statements in regard to the acid of the gastric juice of the dog. Yet it is not completely free; its state of combination appears to be similar to that obtained when hydrochloric acid is added to glycol, leucin or albumen.—*Lancet.*

SKULLS.—At the recent meeting of the Anthropological Congress in Paris, Dr. Lebon gave the results of his experimental re-

searches upon the relation of the volume of the cranium to intelligence. Dr. L. has studied many skulls of many races, and is satisfied that the degree of intelligence is proportionate to the capacity of the cranium. The best endowed races have the greatest average cranial volume, and in any race the biggest heads have "the most brains," in a figurative as well as in a literal sense. There are individual exceptions, but the general law is none the less true. Among his measurements of heads, Dr. L. has made more than twelve hundred from living subjects in Paris, and by a series of curves he shows their relative development. He arranges them in five classes, which stand as follows according to size, the biggest being put at the head: (1) literary and scientific men; (2) the Parisian *bourgeoisie*, or middle class; (3) the old nobility; (4) domestic servants; (5) peasants. —*Boston Jour. of Chem.*

THE DETERMINATION OF SEX IN UTERO.—Dr. Upton, of Michigan, in *New York Medical Record*: I am led in this connection to air a theory of the generation of the sexes which, if correct, will throw more light on this mysterious subject of embryology, and will explain the law discovered by M. Thury, Professor in the Academy of Geneva, and referred to in Dr. Mudd's communication. My experience extends over nearly eight years of obstetric practice, and in every case where I can obtain sufficient and accurate data upon which to base my calculations, I am able to predict the sex previous to delivery. The law is substantially thus, viz: Conception resulting from intercourse *subsequent* to the menstrual flow will result in female offspring; while conception from intercourse in the *latter half* of the menstrual period, or *previous* to the menstrual flow, will result in male offspring. Observations and inquiries carefully made with a view to determine the correctness of this law have established its truth, in my own mind, beyond question.—*Louisville Med. News.*

UREA FORMATION.—Professor Gamgee, of Owen's College, Manchester, has recently published an account of some new experiments to determine the seat of the urea formation in the body. The result is, the experiments have demonstrated that the liver is the principal if not the only organ of the body concerned in urea formation.—*Ibid.*

THE DIFFERENTIATION OF COMA FROM ALCOHOL.—*London Lancet*: After alluding to Dr. Richardson's statement that in alcoholic coma the temperature falls, and that this is a distinguishing mark from other forms of coma, Dr. Macewen alleges that he has observed the temperature in a series of cases of fracture of the skull, opium-poisoning and apoplexy, and that in all these cases the temperature was found very much below the normal. Consequently this point is not to be relied on for purposes of diagnosis. Dr. M. also controverted the statement that

in alcoholic coma there is dilatation of the pupil. He had found contraction the rule; but he had accidentally discovered that if a patient was shaken or disturbed, the pupil dilated, but very soon contracted again. He therefore lays down the rule that an insensible person who, being left undisturbed for from ten to thirty minutes, has contracted pupils, which dilate on his being shaken, without any return of consciousness, and then contract again, can be laboring under no other state than alcoholic coma. Dr. Macewen's position in the Royal Academy of Glasgow gives his observations upon this subject much authority; but the test must have a larger trial before it is finally accepted.—*Louisville Med. News.* I. N. L.

VENEREAL DISEASES

MECHANISM OF ORCHITIS.—In a recent paper on the mechanism of recurrent orchitis, and inflammatory orchitis generally, M. Despres arrives at the following conclusions: 1. Recurrent orchitis and inflammatory orchitis are both due to the retention of semen in the testicle. 2. The cause of this retention is not always situated at the same point, but it is more than probable that swelling of the mucous membrane of the ejaculatory ducts and vas deferens, or of the lining membrane of these canals at the periphery in the prostate, or of the mucous membrane of the urethra, is the ordinary cause of retention of the semen. 3. The rarity of supuration in cases of orchitis allows these inflammations to be designated seminal engorgements of the testicle, in the same way that retention of milk in the mammae has been called lacteal engorgement. 4. The appearance of orchitis on from the tenth to the twentieth day of gonorrhœa, is in accordance with the functional activity of the testes; those patients with an actively exercised organ should develop orchitis towards the end of the urethritis. 5. Orchitis occurring during convalescence from gonorrhœa is not produced by the same mechanism as that following an injury. 6. Orchitis due to a wound, or to some urethral irritation, can be explained by swelling of the affected parts, particularly on a level with the ejaculatory ducts and vesiculæ seminales, which rapidly prevents the flow of semen into its reservoir, the vesiculæ seminales.—*London Medical Record*, Nov. 15, 1878.—*Amer. Jour. of Med. Sciences*, January, 1879.

[This novel explanation gains confirmation from those cases

of simple acute orchitis which are occasionally produced by continued caressing of a virtuous female where sexual gratification is impossible. I have treated several cases of violent orchitis produced in this manner and which rapidly subsided under free purgation, local anodyne applications and nauseating doses of tartar emetic. They originated from no other cause than the one mentioned.]

[IODOFORM.—Iodoform as a local application for chaneroids and chancres has for several years past been my favorite treatment, and I can find no objections to it except the smell. I always use it pure, by sprinkling the powder on the ulcers and then applying a small piece of lint. It causes no pain or irritation and keeps the sore clean, and makes it heal rapidly in most cases and has a most decided local anæsthetic influence.]

Dr. Mracek, clinical assistant to Prof. Sigmund, of Vienna, and Prof. Zeissl, of Vienna, briefly reports the use of iodoform in Sigmund's clinic during the early part of 1878. It was applied in one of the following forms: 1. One part iodoform to one of rectified spirits, and five of glycerine. 2. Three or four parts powdered white sugar. 3. Five parts of vaseline; or as colodion, 1:10 or 1:15. A small brush was used to apply the preparations with, and then cotton-wool was laid over the part and fixed with plaster. The dressing was not changed for twelve or twenty-four hours. Syphilitic ulcers, hard chancres, swollen glands and ulcerating gummata were treated with success. The iodoform causes next to no pain; the sores acquire a clean surface in twenty-four or forty-eight hours, in three or four days granulations are rapidly growing, and within a week cicatrization has set in with remarkable vigor. The antiseptic effect of the iodoform checks all smell from gangrenous sores; and lastly iodoform does not permanently stain the clothes. Compared with lotions of carbolic acid, salicylic acid, chloral and astringent preparations in similar cases, iodoform carries off the palm.

Prof. Zeissl especially recommends iodoform as an internal remedy in syphilitic neuralgia, and describes two cases which, resisting all other remedies, yielded only to iodoform. In suppurating glands, with or without sinusses, he is averse to the local application of iodoform for more than a few days; but in torpid ulcers, whether specific or not, he speaks most warmly of its value.—*Med. Times and Gazette*, and *Amer. Jour. of Med. Sciences*, January, 1879.

Tuos. K.

Editorial.

MEDICAL COMMENCEMENTS.

The annual commencement exercises of the Missouri Medical College and of the St. Louis Medical College and the Missouri Dental College have just been held; the former on the evening of March 5th, the two others, in conjunction, on the evening of March 7th.

The annual meeting of the Alumni Association of the St. Louis Medical College took place on the day of the commencement.

Since the reduction of the fees in the fall of 1873, the Missouri Medical College has greatly increased the size of its winter classes, as well as the number of its graduates. The graduating class this year numbers eighty-two. The St. Louis Medical College established, three years ago, a special graded course of study covering three full years, and this year graduates its first students educated under this regime. Since the adoption of this course the number of students in attendance has slightly diminished. The graduating class this year numbers fifty-seven. This diminution is not an indication that the three-year plan is unpopular, but that the finances of medical students influence them largely in their choice.

SPRING AND SUMMER SESSIONS.

We have received from the Dean of the Missouri Medical College the announcement of its Spring and Summer Course of Lectures and Clinics. This course began on the 2d of March and ends on the 31st of May. The Secretary wishes the students to note that attendance on this course will not be accepted as equivalent to attendance upon one or other of the two regular sessions required for graduation.

We have also received the prospectus of the Spring Session

of the St. Louis Medical College for 1879, beginning March 10th. This course is supplemental to the lectures of the Winter session, and includes such special subjects as practical chemistry in the laboratory; ophthalmology; diseases of the nervous system; gynæcology; minor and operative surgery; physical diagnosis; diseases of children; special therapeutic methods; clinical examination of the urine; histology and syphilis and diseases of the skin. In addition to lectures and special courses of instruction in these departments, all the regular clinics of the College are kept up and several additional clinics are opened. This course also includes practical instruction in pathological anatomy, by autopsies and demonstrations of fresh specimens at the City Hospital.

THE BANQUET.

The Banquet of the Alumni Association of the St. Louis Medical College was as usual a very enjoyable occasion. About eighty of the Alumni, and other physicians interested in the College, were present, together with a few especially invited guests. This banquet has become a regular annual festival, and with the other exercises of the Alumni Association, does much to keep up the interest of the graduates of the College in each other and in their Alma Mater. From the remarks of the President, Dr. I. N. Love, we cull the facts that the Association was organized twelve years ago, largely through the efforts of Professor J. S. B. Alleyne, and that its first President was the late Professor M. L. Linton. Besides its annual exercises and banquet, the Association offers an annual prize for an essay on some subject connected with medicine, and in various other ways labors to promote the advancement of medical science and the improvement of the Alumni of the College.

IN AN editorial notice last month of the salutatory of a local medical editor, we charged him with undervaluing the efforts which have been made in our own city for the elevation of the

Standard of Medical Education, and we spoke of the St. Louis Medical College as having made "praiseworthy and very successful efforts" in that direction by the establishment of "a course of study covering three years." Complaint has been made to us by the Dean of the Missouri Medical College that we have done it an injustice in that we did not also notice the "optional three term course" referred to in the announcement of that College (received a few days ago) for the year 1878-79.

The fact is that we knew of the successful execution of such a plan by the St. Louis Medical College, entered upon three years ago and now bearing its first fruits in the graduation of thirteen students who have persued the full course of three years, but we did not then know of any college in the city adopting a similar course.

The scheme of the Missouri Medical College, if we rightly understand it, is in all essential points the same as that which was brought out in 1869 by the St. Louis College of Physicians and Surgeons and was adopted in the announcement of the Missouri Medical College for 1870-71. After the closure of the College of Physicians and Surgeons the Missouri Medical College ceased to call attention to the scheme, and we are not aware that it was revived in any of its later announcements until last year.

Whether this impression be altogether correct or not, the announcements of our Medical Colleges certainly now invite their students to devote more than two years to the study of medicine, and the announcements of the St. Louis Medical College for three years past have given great prominence to the plan of three years study, and have set it forth in a form which seems to leave no opportunity for the student who once enters upon it to change his mind and abandon it for the old plan of graduating at the end of his second year.

These facts are open to all who will take the trouble to read, and it seems clear to us either that our new confrere in medical journalism did not know what is doing in our own city or else that he has feared to give offense by a just discrimination in the award of praise.

THE PLAGUE.

The anxious interest manifested by the public in everything concerning the plague, justifies the publication of the observations of great men concerning this disease. Field Marshal Von Moltke is regarded as one of the most acute and accurate observers known. The following extracts from his pen on "The Russo-Turkish campaign of 1828 and 1829" will be of interest to the profession. He states that the pest made its first appearance on the right shore of the Danube in Tschernawoda, Bayardschik, Kawarna, Babadagh, Kuestendsche, Mangalia, and at last at Varna, in the middle of May, 1829. It is claimed that the distribution of the ammunition of diseased soldiers stored away a long time introduced it at the latter point, because the guards of the store-room took it first. Up to August 26th, 5509 patients had been received at the plague hospital. Of 41 physicians 28 were affected, of whom 20 died. This serious loss became a calamity, because their places had to be supplied by inexperienced young practitioners or foreigners not conversant with the language. The sick and dying lined the roadside, the fences and the brush. The attack generally came on at, and after sundown. Shivering is succeeded by intense cold, changing into violent fever, with delirium. The patient is communicative and assures that his sickness amounts to nothing. When approached he arises, stumbles backward, or sinks down as if struck by lightning. His memory is bad, he articulates slowly and acts like a drunken man. The only salvation seems to be a very violent perspiration. Internal remedies seem to have no effect. At Varna applications of cold water (shower baths) often cured and always gave relief. In colder weather oiling the body sometimes had good results.

In another of his works "Conditions and Incidents in Turkey," he writes of the pest in Constantinople in 1837. This plague was the most virulent that had existed for a quarter of a century. For entire days he says I have traversed narrow alleys of the city and suburbs, entered the hospitals, surrounded by the inquisitive, have met the dead and dying and am conscious that I did not expose myself to any great danger. The great *arcannum* is cleanliness; the moment I arrived at home, I changed

my under and outer garments from head to foot. The latter garments were hung in the open window during the night. What degree of protection these simple precautions afford, is proven by the small number of victims of the plague among the Franks, while the Turks and Rajahs die by the thousand. Only 8 to 12 Frank families were attacked, and then in most cases they were domestics or children. Among the Dragomen who for centuries have associated with Turks, only one case of plague is known. Where this disease even manifests itself, the most radical disinfection must be resorted to at once.

The Turks view this matter in a different light; the question with them is not, will a person contract the plague, if he touches an affected individual, but rather whether human foresight can prevent earthly evil. Their conviction of the contrary, that this cannot be done is almost admirable. They divide the clothing of the deceased, (that is almost certain to bring their death) cheerfully among each other. Nothing affects their faith, "*Allah Kerim*" (God is merciful) and nothing can escape the "*Kismeth*." With all this fatalism the Turks are tolerant towards us, certain of their superiority. "Do not approach him, he is afraid," he will say good naturedly and without sarcasm. The *hamals* or carriers carry the sick and dead on their backs. He tries to ignore the plague—never says *Dschimudschah* but *Hastalyk* (sickness.)

We quote the following from the carefully prepared reports, which we receive weekly from the Surgeon General, U. S. Marine Hospital, Dr. Woodworth:

"Official reports of European medical officers in China, show conclusively that true "bubonic plague" has prevailed extensively in that Empire during the 30 years preceding 1873, when it was supposed to be wholly extinct. The reports also show that owing to the meager facilities for communication with Central Asia, virulent epidemics may ravage extensive districts of that country, without any knowledge of their existence extending to Europe. The reports present records of the disease having prevailed in the Province of Yunnan, to which it seems to have been introduced from Burmah, during 20 of the 30 years in question, varying in intensity in different parts of the Province, and in different years. The appearance of the disease was coincident with the breaking out of the rebellion against the Imperial government which was longer maintained, and suppressed with more violent measures in Yunnan than in any of the other provinces; conditions which undoubtedly contributed greatly to

its virulence, as did also the superstitious practice of refusing to bury the dead, who are exposed on a bier to the sun till completely decomposed. The plague was very prevalent in Yunnan in 1871-2 3, and in the latter year suddenly re-appeared in Mesopotamia and Persia, gradually extending its area, until in 1877 it reached the shores of the Caspian sea, prevailing especially at the town of Resteh, which has a direct trade with Astrakan. In May and November, 1877, a fever of intermittent type, accompanied with glandular swellings prevailed in the port of Astrakan and in Wetlyanka, and other villages of that province, and in November, 1878, a similar affection again appeared at Wetlyanka; few deaths had occurred up to this time, but about Dec. 1st, the disease assumed the malignant character that has marked the present outbreak. The report of the Russian Medical Service of the Interior for 1877, which has just been made public, announces that 241 cases of Siberian plague were reported to the government during the year, the mortality being 21°; the principal outbreaks occurred in the Provinces of Viatka and Tchernigow, which are a considerable distance from each other, and were contemporaneous with, or occurred soon after, the virulent prevalence of the disease in Persia.

"From the above facts, which have been obtained from official sources, and are in the main well attested, it seems proper to conclude that instead of the late outbreak being due to the spontaneous regeneration of the virus of the plague in the valley of the Volga, or at the farthest, in Persia, the disease was re-introduced from China into Persia, and thence to Russia, local conditions in each instance probably favoring its development. Of these conditions no authentic account will be obtained until the International Commission of Experts who are visiting the infected district, make their report. The return of cold weather, combined with the stringent measures adopted by the government, seem to have confined the late violent outbreak to the limited district where it first appeared. The American Ministers to Austria and to Russia, report that the disease has manifested such an extremely virulent and contagious character, that great alarm exists in the whole of Eastern Europe, and urge upon the government the necessity of taking measures to prevent the possibility of the introduction of the disease into the United States. The measures already taken by this government for preventing the importation of goods from the infected districts, except under proper precautions, are for the present considered sufficient for this purpose, especially if the ports of entry are kept free from the unsanitary conditions that favor the spread of epidemic disease."

Book Notices and Reviews.

THE ANTAGONISM OF THERAPEUTIC AGENTS; AND WHAT IT TEACHES.

By J. MILNER FOTHERGILL, M. D., Member of the Royal College of Physicians, London, etc. Henry C. Lea, Philadelphia, Publisher. 1879.

This remarkable little book, which is "the essay to which was awarded the Fothergillian gold medal of the Medical Society of London, for 1878," comprises in a brief but lucid form, the most interesting discussion of the few subjects treated of, which has ever been presented to the medical profession. The author, in his well-known, charming style, confines his attention to the action of a few familiar, but, for the most part, imperfectly understood drugs, upon the centers of *circulation and respiration*; explaining how their functions may be stimulated or depressed with almost unerring certainty. The conclusions of Dr. Fothergill are so rationally and forcibly presented as to make a profound impression on all so fortunate as to read them.

We would advise every practitioner to buy this little work as soon as possible, for the fact is he cannot afford to do without it.

W. COLES.

A PRACTICAL TREATISE ON THE MEDICAL AND SURGICAL USES OF ELECTRICITY. Including Local and General Faradization; Localized and Central Galvanization; Electrolysis and Galvano Cautery. By GEO. M. BEARD, A. M., M. D., and A. D. ROCKWELL, A. M., M. D. Second Edition, Revised, Enlarged and mostly Re-written. With nearly 200 Illustrations. [New York: Wm. Wood & Co., Great Jones Street, 1878.]

This is the very best work on Electricity in the English language.

A PRACTICAL MANUAL OF THE DISEASES OF CHILDREN, WITH A FORMULARY. By EDWARD ELLIS, M. D., Late Senior Physician to the Victoria Hospital for Sick Children, etc. Third Edition. 8 vo. pp. 213. [New York: Wm. Wood & Co., 27 Great Jones Street. 1879.]

DIFFERENTIAL DIAGNOSIS: A Manual of the Comparative Semiology of the More Important Diseases. By T. DE HAVILLAND HALL, M. D., Assistant Physician to the Westminster Hospital, London. American Edition with Extensive Additions. [Philadelphia: D. G. Brinton, 115 South Seventh Street. 1879.]

PHYSIOLOGY: Preliminary Course Lectures. By J. T. WHITTAKER, A. M., M. D. Prof. of Physiology and Clinical Medicine in

the Medical College of Ohio, etc. Illustrated. 16 mo. pp. 288. Price, \$1.75. [Cincinnati: C. R. Murray. 1879.]

THE PATHOLOGICAL ANATOMY OF THE EAR. By HERMAN SCHWARTZE, M. D. Professor in the University of Halle. With the Author's Revisions and Additions, and with the Original Illustrations. Translated by J. ORNE GREEN, A. M., M. D. [Boston: Houghton, Osgood & Co. 1878. 8 vo. \$2.00.]

AN INTRODUCTION TO PATHOLOGY AND MORBID ANATOMY. By T. HENRY GREEN, M. D., F. R. C. P., London; Physician to Charing Cross Hospital. Third American from the Fourth Revised and Enlarged English Edition, With 132 Illustrations. [Philadelphia: Henry C. Lea. 1878.]

NEW AND ORIGINAL THEORIES OF THE GREAT PHYSICAL FORCES. By HENRY RAYMOND RODGERS, M. D. 1878. [From the Author.]

A MANUAL OF PHYSICAL DIAGNOSIS. By FRANCIS DELAFIELD, M. D., and CHAS. F. STILLMAN, M. D. [New York: Wm. Wood & Co.] 1878. Illustrated.

Dr. Delafield has prepared this manual for those who teach as well as those who are learning the art of physical diagnosis. He has made it as concise as possible, and has had it bound interleaved, so that it may be used as a note book as well as a guide.

Dr. Stillman prepared the drawings. They are really beautiful and accurate. He has used the superimposed plan for the plates, which, as he says, is an old plan, yet it is of much practical value. We cheerfully recommend the work.

CONSPICUUS OF ORGANIC MATERIA MEDICA AND PHARMACAL POLARY. Comprising the Vegetable and Animal Drugs; their Character, Geographical Origin, Constituents, Doses, Adulterations, etc. Table of tests, and solubilities of alkaloids appended. By L. E. SAYRE, Ph. G. pp. 220. [Philadelphia: D. G. Brinton, 115 South Seventh street. 1879.]

ELEMENTS OF COMPARATIVE ANATOMY. By CARL GEGENBAUR, Professor of Anatomy and Director of the Anatomical Institute at Heidelberg. Translated F. JEFFREY BELL, B. A., Magdalen College, Oxford. The translation is revised and a preface written by E. RAY LANKESTER, M. A., F. R. S., Fellow of Exeter College, Oxford, and Professor of Zoology and Comparative Anatomy in University College, London. pp., 645. 8vo. [London: Macmillan & Co.] 1878.

The Female Generative Organs in their Medico-Legal Relations. By J. W. UNDERHILL, M. D., Lecturer on Medical Jurisprudence in the Cincinnati College of Medicine and Surgery.

[Reprinted from the American Journal of Obstetrics and Diseases of Women and Children, Vol. 12., No. 1, January, 1879.]

Diphtheria and its Treatment. Epidemic of 1875-76, Meriden, Conn. By CHAS. H. S. DAVIS, M. D. [Reprinted from the Richmond and Louisville Medical Journal.]

Upon the Treatment of Strumous Disease, by what may be called the Soliátara Method. By HORATIO R. STORER, M. D., Newport R. I., President of the Gynæcological Society of Boston. [Reprinted from The Boston Medical and Surgical Journal, June 27, 1878.]

Variola: its Causes, Nature, and Prophylaxis, and the Dangers of Vaccination. By C. SPINZIG, M. D. (Literary revision by WM. T. HARRIS, Superintendent of the Public Schools of St. Louis.) Sold by St. Louis Book & News Co., 307 N. Fourth street.

The Development of the Nervous Tissues of the Human Embryo. By DR. H. D. SCHMIDT, Member of the American Neurological Association. [Reprinted from the Journal of Nervous and Mental Disease, July, 1877.]

Optic Neuritis, with Notes of Three Cases. By C. J. LUNDY, M. D. [Reprint from Detroit Lancet, December, 1878.]

A Review of the Neuroses of the Pneumogastric and Sympathetic Nerves, with some Account of the Anatomy, Physiology, and Pathology of these Nerves; also of the Vaso-Centers and Sweat Centers. The Exhibition of Electricity, Atropin, Muscarin and Pilocarpin; with cases to Illustrate, etc. By JOHN J. CALDWELL, M. D., Baltimore, Md. [Reprint from the Va. Med. Mo.]

Aphasia, or Aphasic Insanity, Which? A Medico-Legal Inquiry. By DR. C. H. HUGHES, St. Louis, Mo. [From the American Journal of Insanity, for January, 1879.]

The Local Treatment of Eczema. By HENRY G. PIFFARD, M. D., Professor of Dermatology, University of the City of New York; Surgeon to Charity Hospital, etc. [Reprinted from the Medical Record, October 26th, 1878.]

Treatment of Fracture of the Shaft of the Femur, the "American Method." A Paper read before the Minnesota State Medical Society, at St. Peter, June 18, 1878. By FRANKLIN STAPLES, M. D., of Winona. [Reprinted from the transactions of the Society.]

A New Treatment for Spine Diseases. By MEIGS CASE, M. D., Oneonta, N. Y. [Reprint from the Cincinnati Lancet and Observer, May, 1878.]

Case of Repeated Attacks of Apoplexy with Aphasia. By DR. H. D. SCHMIDT, Pathologist of the Charity Hospital of New Orleans, and Member of the American Neurological Association. (With Plate.) [Reprinted from the Journal of Nervous and Mental Disease, July, 1878.]

Placenta Prævia. By G. M. B. MAUGHS, M. D., Professor of Obstetrics and Diseases of Women, Missouri Medical College. [Read before the St. Louis Obstetrical and Gynæcological Society, Sept. 19, 1878.]

Total Abstinence. A Course of Addresses. By BENJAMIN WARD RICHARDSON, M. D., F. R. S., M. A., LL. D., F. S. A. Fellow of the Royal College of Physicians and Honorary Physician to the Royal Literary Fund.

Case of Poisoning by Oil of Chenopodium. By THOMAS R. BROWN, M. D., Professor of Clinical and Operative Surgery, and Diseases of the Genito-Urinary Organs, College of Physicians and Surgeons, Baltimore, Md. [Reprint from the Maryland Medical Journal for November, 1878.]

A History of the Diagnosis, Pathology and Treatment of Yellow Fever. By J. B. MARVIN, M. D., etc. [Reprinted from the American Practitioner, November, 1878.]

On Gastro-Elytrotomy. By HENRY J. GARRIGUES, M. D., Fellow of the American Gynæcological Society, Fellow of the New York Obstetrical Society, etc. With three woodcuts. [Reprinted from the New York Medical Journal, October and November, 1878.]

Address of W. O'DANIEL, M. D., President of the Medical Association of Georgia, delivered at the Twenty-Ninth Annual Meeting. [Reprint from the Transactions of the Medical Association of Georgia, 1878.]

An Essay on Menstruation and Ovulation. By O. S. SANDERS, M. D., Boston.

Report of Investigations into the Pathogeny of Diphtheria. Conducted by EDWARD CURTIS, M. D., AND THOMAS E. SATTERTHWAITE, M. D.

On Artificial Disinfection as a means of Preventing the Spread of Infectious Diseases. By REV. J. H. TIMINS, M. A., F. G. S., Vicar of West Malling, Kent Student of St Thomas' Hospital, London.

A Series of American Clinical Lectures, Edited by E. C. SEGUIN, M. D. Volume III. No. XI. [Whole No. 36.] Two Lectures on Lister's Antiseptic Method of Treating Surgical Injuries. By JAS. L. LITTLE, M. D., N. Y. The Same; The Diagnosis of Progressive Locomotor Ataxia. By E. C. SEGUIN, M. D., N. Y. [New York: G. P. Putnam's Sons.]

METEOROLOGICAL OBSERVATIONS.

By A. WISLIZENUS, M. D.

The following observations of daily temperature in St. Louis are made with a MAXIMUM and MINIMUM thermometer (of Green, N. Y.). The daily minimum occurs generally in the night, the maximum at p. m. The monthly mean of the daily minima and maxima added and divided by 2, gives quite a reliable mean of the monthly temperature.

THERMOMETER, FAHRENHEIT—JANUARY, 1879.

Day of Month	Minimum.	Maximum.	Day of Month	Minimum.	Maximum.
1	28.0	30.5	18	17.0	35.0
2	6.0	7.5	19	3.0	18.5
3	10.5	2.0	20	14.0	42.0
4	9.0	7.0	21	27.0	55.0
5	2.0	10.0	22	38.0	54.5
6	3.0	17.0	23	28.5	34.0
7	12.0	28.0	24	28.5	52.0
8	15.0	21.0	25	38.0	53.0
9	0.0	16.0	26	34.0	54.0
10	1.0	25.0	27	48.0	58.0
11	20.0	32.0	28	39.0	42.5
12	11.5	32.0	29	36.5	43.0
13	17.5	35.0	30	32.0	42.0
14	24.0	29.0	31	34.0	43.0
15	25.5	39.0			
16	25.0	29.5	Means	19.0	33.0
17	21.0	37.5	Monthly Mean	26.0	

Quantity of rain 1.75 inches.

ERRATUM: The minimum in December, 1878, was 1.0 deg. on the 24th

MORTALITY REPORT.—CITY OF ST. LOUIS.

FROM DEC. 29, 1878, TO JAN. 25, 1879, INCLUSIVE.

Septicæmia.....6	Cholera Infantum.....	Hydrocephalus and Tubercular Meningitis.....3	Apoplexy.....8
Measles.....2	Inanition, Want of Breast Milk, etc.40	Meningitis and Encephalitis.....8	Cyano-sis and Atelectasis.....3
Syphilis, Cong'al.....1	Alcoholism.....3	All Diseases of the Brain and Nervous System.....33	Premature and Preternatural Birth.....11
Scarlatina.....2	Rheumatism and Gout.....11	Cirrhosis of Liver and Hepatitis.....15	Surgical Operations.....1
Pyæmia.....1	Cancer.....11	Enteritis, Gastro-enteritis, Peritonitis, and Gastritis.....19	Deaths by Suicide.....1
Erysipelas.....8	Phthisis Pulmon.....57	Bright's Disease and Nephritis.....4	Deaths by Accident.....14
Diphtheria.....26	Other Diseases of Respir'y Organs30	Other Diseases of Urinary Organs.....2	
Membranous Croup13	Enterocolitis.....27	Chronic lead poisoning.....	
Whooping Cough.....3	Marasmus—Tubes Mesenterica and Scrofula.....22		
Typhus Fever.....	Convulsions.....23		
Typhoid Fever.....8	Aneurism.....		
Cerebro Spinal Fe.			
Remittent, Intermittent, Typho-Malarial, Congestive and Simple Continued Fevers.....7			
Puerperal Disease's11			
Diarrheal.....8			

CHAS. W. FRANCIS, Health Commissioner.

DEATHS AND RATE OF MORTALITY

*Per 1000 Inhabitants, Annually, in the Largest American and Foreign Cities,
According to the Latest Returns.*

CITIES.	Population.	Date of Return.	Deaths from all Causes.	Annual Death Rate per 1000	DEATHS.	
					Infants under 1 Year of Age.	Persons Aged 60 Yrs and upwards.
New York.....	1,086,000	7 weeks ending Jan 18	1,778	28.49	.....	.....
Philadelphia.....	577,500	5 " " Feb 1	1,748	21.42	.....	.....
Brooklyn.....	549,500	5 " " " 1	1,191	23.52	.....	.....
St. Louis.....	503,000	1 " " Jan 25	498	12.87	.....	.....
Chicago.....	460,000	Month of January.....	664	16.98	.....	.....
Baltimore.....	355,000	7 weeks ending Feb 1	778	21.61	.....	.....
Boston.....	353,000	5 " " " 1	793	22.77	.....	.....
San Francisco, Cal.	300,000	Month of December.....	438	17.19	.....	.....
Cincinnati.....	280,000	7 weeks ending Feb 1	519	20.44	.....	.....
New Orleans.....	210,000	7 weeks ending Jan 26	653	27.01	.....	.....
Buffalo.....	170,000	.....	.....	.....	.....	.....
Cleveland.....	162,000	1 weeks ending Jan 25	156	12.54	.....	.....
Washington, D. C.	160,000	Month of December.....	321	23.61	.....	.....
Pittsburgh.....	145,000	" " January.....	244	19.77	.....	.....
Newark.....	126,000	.....	.....	.....	.....	.....
Detroit.....	125,000	.....	.....	.....	.....	.....
Milwaukee, Wis.....	123,600	Months Nov. and Dec.	277	13.40	.....	.....
Richmond Va.....	79,000	Month of January.....	152	23.08	.....	.....
New Haven, Conn	60,000	.....	.....	.....	.....	.....
Charleston.....	57,000	7 weeks ending Feb 1	129	23.59	.....	.....
Memphis, Tenn.....	50,000	.....	.....	.....	.....	.....
Mobile.....	40,000	.....	.....	.....	.....	.....
Denver.....	.....	.....	.....	.....	.....	.....
Galveston.....	.....	.....	.....	.....	.....	.....
Indianapolis.....	.....	.....	.....	.....	.....	.....
Springfield, Mass.	31,500	.....	.....	.....	.....	.....
Nashville, Tenn.....	27,000	Month of January.....	71	31.38	.....	.....
Sacramento.....	25,000	.....	.....	.....	.....	.....
St. Paul, Minn.....	20,000	.....	.....	.....	.....	.....
London.....	3,577,304	January 12 to 18.....	1,947	28.10	.....	.....
Paris.....	1,988,806	" " 11 to 17.....	1,039	27.20	.....	.....
Berlin.....	1,019,620	December 22 to 28.....	525	26.10	.....	.....
Vienna.....	727,271	January 5 to 11.....	375	26.20	.....	.....
St. Petersburg.....	839,741	.....	.....	.....	.....	.....
Bombay.....	644,405	December 1 to 17.....	481	30.60	.....	.....
Glasgow.....	563,940	January 12 to 18.....	300	27.00	.....	.....
Liverpool.....	532,681	" " 12 to 18.....	376	36.40	.....	.....
Naples.....	475,407	December 3 to 9.....	282	32.00	.....	.....
Calcutta.....	429,535	" " 8 to 14.....	457	55.50	.....	.....
Hamburg (state).....	406,104	.....	.....	.....	.....	.....
Birmingham.....	383,117	January 12 to 18.....	216	29.00	.....	.....
Brussels.....	175,285	" " 12 to 18.....	179	24.60	.....	.....
Manchester.....	330,514	" " 12 to 18.....	242	34.90	.....	.....
Dublin.....	314,666	" " 12 to 18.....	291	48.30	.....	.....
Leeds.....	304,948	" " 12 to 18.....	145	24.30	.....	.....
Amsterdam.....	302,266	" " 5 to 11.....	145	24.90	.....	.....
Sheffield.....	289,537	January 12 to 18.....	144	25.30	.....	.....
Rome.....	285,214	.....	.....	.....	.....	.....
Turin.....	227,846	December 22 to 28.....	131	28.30	.....	.....
Alexandria.....	212,634	Dec. 29 to Jan. 4.....	161	39.50	.....	.....
Breslau.....	167,000	January 5 to 11.....	170	32.70	.....	.....
Edinburgh.....	122,371	" " 12 to 18.....	100	23.00	.....	.....
Dresden.....	207,845	" " 5 to 11.....	92	22.50	.....	.....
Bradford.....	183,088	" " 12 to 18.....	81	22.10	.....	.....
Salford.....	170,251	" " 12 to 18.....	115	33.70	.....	.....
Nottingham.....	165,297	.....	.....	.....	.....	.....
Hull.....	143,139	January 12 to 18.....	57	20.30	.....	.....
Dundee.....	142,567	.....	.....	.....	.....	.....
Portsmouth.....	129,467	.....	.....	.....	.....	.....
Leicester.....	121,473	.....	.....	.....	.....	.....
Oldham.....	107,366	.....	.....	.....	.....	.....
Brighton.....	103,925	.....	.....	.....	.....	.....

Trommer's Extract of Malt.

The rapidly increasing demand for our IMPROVED EXTRACT OF MALT, during the four years that it has been manufactured and offered to the medical profession in America, justifies the belief that in its production here we are meeting a generally felt want.

Long experience in manufacturing Malt Extract has enabled us to completely overcome the many difficulties attending its manufacture in large quantity; and we positively assure the profession that our Extract of Malt is not only perfectly pure and reliable, but that it will keep for years, in any climate, without fermenting or molding, and that its flavor actually improves by age. Our Extract is guaranteed to equal, in every respect, the best German make, while, by avoiding the expenses of importation, it is afforded at less than half the price of the foreign article.

The Malt from which it is made, is obtained by carefully malting the very best quality of selected Toronto Canada Barley. The Extract is prepared by an improved process, which prevents injury to its properties or flavor by excess of heat. **It represents the soluble constituents of Malt and Hops**, viz: Malt Sugar, Dextrine, Diastase, Resin and Bitter of Hops, Phosphates of Lime and Magnesia, and Alkaline Salts.

Attention is invited to the following analysis of this Extract, as given by S. H. Douglas, Professor of Chemistry, University of Michigan, Ann Arbor.

TROMMER EXTRACT OF MALT CO:—I enclose herewith my analysis of your Extract of Malt:

Malt Sugar, 46.1; Dextrine, Hop-bitter, Extractive Matter, 23.6; Albuminous Matter (Diastase), 2.469; Ash—Phosphates, 1.712; Alkalies, .377; Water, 25.7 Total, 99.958.

In comparing the above analysis with that of the Extract of Malt of the German Pharmacopœia, as given by Hager, that has been so generally received by the profession, I find it to substantially agree with that article.

Yours truly,
SILAS H. DOUGLAS,
Prof. of Analytical and Applied Chemistry.

This invaluable preparation is highly recommended by the medical profession, as a most effective therapeutic agent, for the restoration of delicate and exhausted constitutions. It is very nutritious, being rich in both muscle and fat producing materials.

The very large proportion of Diastase renders it most effective in those forms of disease originating in imperfect digestion of the starchy elements of food.

A single dose of the Improved Trommer's Extract of Malt, contains a larger quantity of the active properties of Malt, than a pint of the best ale or porter; and not having undergone fermentation, is absolutely free from alcohol and carbonic acid.

The dose of adults is from a dessert to a tablespoonful three times daily. It is best taken after meals, pure, or mixed with a glass of milk, or in water, wine, or any kind of spirituous liquor. Each bottle contains 1 1-2 lbs of the Extract.

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EXTRACT OF MALT, With Hops (Plain),	\$1.00
“ “ “ “ Pyrophosphate of Iron (Ferrated) ..	1.00
“ “ “ “ Cod Liver Oil ..	1.00
“ “ “ “ Cod Liver Oil and Iodide of Iron ..	1.00
“ “ “ “ Cod Liver Oil and Phosphorus ..	1.00
“ “ “ “ Hypophosphites ..	1.50
“ “ “ “ Iodides ..	1.50
“ “ “ “ Alteratives ..	1.50
“ “ “ “ Citrate of Iron and Quinia ..	1.50
“ “ “ “ Pepsin ..	1.50

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TROMMER EXTRACT OF MALT CO.,

FREMONT, OHIO.

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PARKE, DAVIS & CO'S NEW REMEDIES.

CASCARA SAGRADO. We have a large supply of this valuable remedy, which we know to be genuine, in the form of fluid extract, and are prepared to fill orders for any amount. This drug is undoubtedly one of the most important additions to the Materia Medica and is indicated particularly in habitual constipation, and in dyspeptic complications. It has been proven in repeated trials to be one of the most pleasant and reliable laxatives known to the practitioner. False varieties of this drug are undoubtedly in the market, and we caution our friends against using any of this preparation but what bears our firm name and capsule.

(*Rhamnus Purshiana.*)

the Materia Medica and is indicated particularly in habitual constipation, and in dyspeptic complications. It has been proven in repeated trials to be one of the most pleasant and reliable laxatives known to the practitioner. False varieties of this drug are undoubtedly in the market, and we caution our friends against using any of this preparation but what bears our firm name and capsule.

BERBERIS AQUIFOLIUM. This, perhaps the most valuable of the list of indigenous medicines, was first introduced by us. The profession have long sought in vain for a remedy combining tonic as well as alterative properties. This preparation combines both in a marked degree, and has been proven by repeated trials to be a sure remedy in syphilis, salt rheum, tubercular affections, psoriasis, and all complaints occasioned by a vitiated state of the blood. Physicians who have been disappointed in the results obtained from the use of other preparations, should not condemn the remedy until our extract has been tried, as many spurious varieties—notably the Oregon grape plant—are being extensively sold for the true *Berberis Aquifolium*.

GRINDELIA ROBUSTA. This remedy is indicated in asthma, and many practitioners who have used our preparation have found it to be of great value in most of the cases tried. In combination with *Yerba Santa* it has also been found specially efficacious in bronchial affections. While the general verdict is largely in its favor, still some have been disappointed in its use. In these cases it was probably owing to the fact that the supply of the drug was not genuine. It is a well known fact that many of the varieties of the family bear so close a resemblance to each other that botanists distinguish them only with great difficulty, and the *Squarrosa* and other varieties are hence often unwittingly substituted for the *Robusta*. Our own supply is gathered for us under the direction of a competent botanist, and is therefore known to be genuine.

YERBA REUMA. This is an herbaceous plant, growing near the foot hills of the coast range mountains in California. Its Spanish name implies flowering or flux herb. It has as yet been tested only locally in catarrh, gonorrhoea, leucorrhoea, and catarrhal ophthalmia. The success which it has met with in these complaints justifies us in predicting for it an important place among the new standard remedies. We trust that our professional brethren will favor us with the results of its use in other kindred diseases in which its administration would seem to be indicated.

(*Frankenia Grandifolia.*)

PENTHORUM SEDOIDES. This fluid extract has largely come into use as a remedy for catarrh, pharyngitis, catarrhal laryngitis, chronic bronchitis with increased secretion, and in catarrhal affections of the stomach and bowels.

FIVE-FLOWERED GENTIAN. Among the many substitutes for quinine, this plant is one of the most valuable. In many cases where quinine and other anti-periodics have proved futile, this remedy has been found very efficacious. In combination with *hydrastis*, it has been found an excellent tonic in depraved conditions of the digestive apparatus, increasing the biliary secretions and acting as a stimulant to the excretory organs. In combination with *gelsemium*, and in derangement of the biliary organs in conjunction with *podophyllin*, it seems to increase the action of those agents.

(*Gentiana Quinquiflora.*)

BOLDO. This is an Alpine evergreen shrub, found upon the Andes in Chili, and is largely used by the natives of that country. Its therapeutical properties are best seen in blennorrhagia, chronic catarrh of the bladder, hepatic abscesses, and atony of the digestive organs, in all of which diseases it has afforded great benefit. Dr. Chas. A. Zaramba, member of the Sociedad Medica, Santiago de Chile, is enthusiastic in its praise, and pronounces it one of the most important of the recent additions to our materia medica.

Send stamp for our descriptive circular giving full information as regards the therapeutical applications of fifty new and valuable remedies.

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OF
MISSOURI

[ORGANIZED IN 1836.]

VOLUME II.

REVISED BY THE COMMITTEES ON PUBLICATION AND
DEBATES FOR THE YEAR 1879.

[Reprinted from the St. Louis Medical and Surgical Journal.]

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GEO. O. RUMBOLD & CO.
1879.

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Hygienic Management and Prophylaxis of Yellow Fever.

JANUARY 11, 1879.

DR. HUGHES:—I desire to call the attention of the Society to the hygienic management, prophylaxis and quarantining of yellow fever. I have some peculiar views upon the subject, and though I have presented them before and elsewhere, I reproduce them to-night. Last August, whilst I was in the North, I sent a communication to Dr. Rumbold, the editor of the *ST. LOUIS MEDICAL AND SURGICAL JOURNAL*, and to a relative (then living in Memphis), in regard to the prophylactic power of ice and refrigerating appliances, in preventing the spread of yellow fever. I proposed that the profession should draw a lesson from the teachings of Nature and follow faithfully in her footsteps in the prevention of this plague which has spread such consternation over the land, and done so much damage to life, and indirectly to property. Dr. Rumbold received that communication from me in August; he regarded it as a good enough suggestion provided it were practicable. Now, Mr. Chairman, it occurs to me that it is practicable, and that is to be the only successful method of quarantining the cities of the South against the importation and spread of the germs of yellow fever. It is not a difficult thing to establish quarantine ships at all endangered ports, and to subject every passenger coming from an infected vessel or a suspected infected vessel, with all his effects, to a temperature which will be absolutely incompatible with the continued vitality of the yellow fever germs; and instead of establishing inland quarantines many miles away from an infected city, a more rational plan would be to establish the quarantine upon the outskirts of the town infected, and require all persons leaving an infected place to be immediately subjected to a temperature, with all their clothing and effects, that will destroy the vitality of the yellow fever germs; to pass through a temporary freezing process, and their clothing washed and frozen. When hospitals are constructed for the treatment of yellow fever patients, the places of ingress and egress can be made so cold that a nurse or a physician passing from an infected patient need not carry away from that patient the germs of the disease; and you can pile your ice about the mouths of your sewers, and you can scatter the various freezing mixtures with profusion wherever the disease manifests itself, and I have no doubt if they had had thousands of tons of ice, (and it would have been better had they expended that much,) to have scattered in the vicinity where the disease first manifested itself last summer, more people would have escaped. It is not my purpose now to speak *in extenso* upon the manner in which this prophylactic power of cold can be artificially used, by man, in imitation of Nature, to stamp out this plague. I am confident artificially induced cold is our only resource, and this will be the method of quarantine of the future.

DR. MOORE:—The suggestion of Dr. Hughes looks to me to be plausible—following the footsteps of Nature. We know that Jack Frost overcomes Yellow Jack; one difficulty, however, presents itself in the matter: To subject a man, in the middle of August or July, *in a southern climate*, to the temperature of zero, would probably need an additional prophylactic to prevent the cold from producing some more fatal disease, perhaps, than yellow fever. Perhaps the Doctor has some remedy for *that*.

DR. HUGHES:—I have.

DR. MOORE:—I doubt it.

DR. JOHNSTON:—There has been a committee appointed by this Society to investigate the subject of yellow fever, and I am anxious to hear from them. There have been committees appointed before to investigate yellow fever. The celebrated Louis was chairman of a committee of 1778, and celebrated English and Spanish physicians were on that committee. The most of us know that those were very learned men—not so learned perhaps as some of those Congressional committees who have gone down south to investigate yellow fever. Our profession, if I read the news correctly, are playing second fiddle to this Congressional committee. That we should see a committee appointed by the Congress of the United States, constituted of congressmen and lawyers, to teach doctors to investigate that which has been their life study, is humiliating to every physician, not only in America, but throughout the world. I have heard of a great many absurdities in my life, I have witnessed a great many acts of humiliation in my profession, but I have never seen it humiliated as it has been by Dr. Woodward and other members of this committee, who submitted for a little money to go down and humble themselves and their profession to a Congressional committee.

My friend Dr. Hughes has assumed, as many of the profession have assumed, that this phenomena of yellow fever depends upon some living germ. What germ? If the doctor will demonstrate this germ then we can see the remedy. Dr. Bemiss has telegraphed that he is of the opinion that it is imported. Just think of an educated physician telegraphing all over the country that he is going forth to investigate yellow fever, and announces it is of importation. Now, is this not humiliating that Dr. Bemiss would place himself in such position. Rush formed the opinion that it was once imported into Philadelphia. Now when the learned fathers of the profession in America, when the learned fathers of the Spanish profession, when the learned fathers of the French profession have not been able to decide that question, we have the humiliating spectacle of an American Congress sending non-professional men and our professional brethren to decide the question. It is a germ that will develop in the higher regions, intermittent fever, in the American bottom, swamp fever, and in the cotton regions, yellow fever.

Remarkable Case of Injury of the Spine. Reported by Dr. Adolphus Greene.

Mrs. E. H——, 50 years of age, met with an accident on the night of October 8th, 1878, between 9 and 10 o'clock, while standing under a porch, on the southwest corner of Fifth and Elm streets, while viewing the procession of the so-called Veiled Prophets. The porch, which was at the time crowded with people, gave way, and fell upon her. When picked up, about ten minutes afterwards, she, to use her own words, "had no feeling of having any lower extremities, or lower part of the body." When I was called to see her, a half an hour after the accident, I found her cold and pulseless, and her abdomen bulged out enormously. I ordered stimulants to bring about reaction, and as soon as this was accomplished, proceeded to examine her. Her mental faculties were perfectly normal, but her lower extremities were paralyzed with complete loss of motion and sensation; no fracture or dislocation of the extremities could be discovered, but at my first examination of the vertebral column, I thought I detected a fracture of the tenth dorsal vertebra, but could not verify it at my second examination. As she could feebly move her arms, and the head could be turned in every direction, and she only complained at the time of some pain in her elbows, which she herself ascribed to some one having tramped upon her arms, I did not carefully examine the cervical region of the spine, but my whole attention was directed to that part of the spine, where the paralysis of the abdominal muscles must have arisen. Dry cupping was ordered to the whole length of the spine, and sulphate of quinia with bromide of potassium, and a few drops of tinct. aconiti radiceis was prescribed.

OCTOBER 9TH.—Patient had improved so far that she could realize sensations produced by the finger or other object upon her paralyzed limbs, but motion was entirely and completely lost, and the urinary bladder very much distended; I introduced the catheter, and had to make pressure over the abdomen in order to empty the bladder entirely; patient complains of some soreness of the neck and shoulder; respiration is mostly diaphragmatic, ribs moving but very little; I requested consultation; Dr. Hodgen was called, and we found a luxation of the left superior articular process of the fifth cervical vertebra, forward, the spinous process of which could not be distinguished in the median line, which was due to a luxation, probably combined with fracture of one its articular processes; on pressing the vertebra, a distinct crepitus was felt and the patient complained of intense pain in the right arm, along the posterior margin of the sterno-cleido; we felt that the transverse process of the fifth cervical vertebra was not in line with the transverse process of the vertebra below; I assisted Dr. Hodgen in re-

ducing it; the face, which had turned somewhat to the right, now looked directly forward; she could now respire more freely.

OCT. 10TH.—Fever abated; aconite discontinued; quinine and bromide of potassium were ordered, and I used the catheter morning and evening; sphincter ani is paralyzed; feces lodged in the lower part of the rectum were discharged involuntarily and unconsciously; no sensitiveness in coccygeal region; she can not feel when she is wet.

OCT. 11TH.—State of things the same; treatment continued; I am told by a lady, daughter-in-law of the patient, that the skin in the region of the nates of patient feels wet, like if it were sore. On account of the injury of fifth cervical, I do not like to disturb the patient to day.

OCT. 12TH.—Turned the patient a little on one side to look out for bed-sores, and made an unpleasant discovery; the soft parts covering the sacrum and coccyx, the skin and gluteus maximus on both sides of sacrum and coccyx were already in a state of gangrene and looked black, the after part occupied a space about six by eight inches; the worst place was at the lower part of the coccyx, to within one-third or a half an inch from the margin of the anus. Upon inquiry I learned, that when the porch was crushing down, a gate or post, that became loose, first struck her on the back, and immediately she was knocked down backwards upon that joist, the fragments of the part and people from the porch falling upon her in front. It is very probable that same piece of wood that struck her in the region of the lower dorsal vertebra and injured her spinal cord, also caused severe contusion to the soft parts of her nates, sacral and coccygeal region, and the fragments of the porch, and the people that fell on the front side of her body increased the lesion; the diminished resistance of the tissues caused by the paralysis and the continued pressure upon the affected part caused the rest. The best means to avoid evil consequences, would be to remove the pressure altogether from the already affected parts, to lay her on the side instead of on the back, but she can not lay on her side not even a-half an hour in the twenty-four hours. I ordered an air cushion to diffuse the pressure and dressed the parts with a weak solution of carbolic acid in glycerine.

OCT. 13TH.—Dr. Hodgen saw the patient again, and approved of my treatment.

OCT. 14TH.—Fever entirely abated. I reduced the dose of bromide, continued the quinine, and emptied the bladder morning and evening. The gastric difficulties which presented themselves were combatted with appropriate remedies.

OCT. 16TH.—Until to-day nothing worthy of remark has occurred. General debility commences to be the prominent symptom, and hypostatic pneumonia makes its appearance; I discontinued the bromide; combined the quinine with iron; ordered a more nourishing diet, stimulants, raw eggs, eggnog, etc.; had

her raised to at least a half sitting position several times a day, and while dressing the wound twice in the twenty-four hours. She laid on the side as long as she could stand it, which was about one-half or three-quarters of an hour at the highest. The vagina commenced to indicate symptoms of decomposition of its natural secretion. I injected it with a weak solution of carbolic acid in water; the urine commences to smell very strongly of ammonia, and the bladder exhibits signs of catarrhal inflammation. Injections of warm water containing four or five grains of carbolic acid to the ounce acted well.

No change of importance occurred from October 16th to 25th.

Nov. 8TH.—Up to the 25th of October there was not the least muscular contraction, and her bladder was in such an atonic state that in using the catheter I had to make pressure over the abdomen in order to empty it entirely. Upon Dr. Hodgen's suggestion to try ergot as an excitant of muscular contraction, I prescribed fluid extract of ergot, of which she took a teaspoonful from two to three times a day, but having seen no effect after the use of a whole ounce, and fearing the evil effects of it (gangrene), added to that already present, I discontinued the use of it. Up to the 25th, being afraid of injury to the cord, I did not administer strychnia, but seeing that there was not the least muscular contraction, and fearing that muscular atrophy would take place to such an extent that even if the cause of the paralysis should disappear, the muscles would never regain their functions, I commenced cautiously to use *nux vomica*, the tincture, combined with the quinia and iron, partly as a tonic and partly to act on the cord, beginning with two drops a day, and adding two drops each day. On the fourth day from the commencement of its administration, when she took eight drops in twenty-four hours, involuntary muscular contractions, short spasms like electric shocks commenced to take place now and then in the lower extremities, especially when the bed covering was taken off suddenly, and this more in the right than in the left lower extremity. By the time she took sixteen drops a day voluntary motions commenced, first in the big toe of the right foot, and after some days in the left. The motions in the latter were always less than in the former, and the urine passed off in a tolerably good stream from the catheter, without pressure upon the abdomen. Cathartics were employed to regulate her bowels, as she was usually, even in health, inclined to costiveness. Afterwards I had to assist the cathartics with injections.

Nov. 9TH.—Commenced the use of electricity with the interrupted current. Placing a copper plate to the plantar surface of her feet, to which plate was attached the negative pole, the positive pole I took in one hand, and with the other made wet in warm water, I electrified her. There was no appreciable muscular contraction while under the current; still it did good service; the pain in her arms diminished, and the movement of

her feet improved a little. Meantime the necrosed tissue commenced to separate on the sides from the lining, and allowed an examination of the depth of the destruction of tissue. Dr. Hodgen visited her again with me, examined the wound, felt at the posterior margins of the sterno-cleido, about the fifth cervical vertebra, and agreed to continue my treatment.

Nov. 10TH.—Electrified her again a little stronger; motions in left foot also improved, and she lays a little longer on the side after dressing the wound. The œdema in the legs and ankles has so much diminished that I can feel the maleoli and tarsal bones. As the patient feels tired after the electrization, it is repeated every second day only.

Nov. 12TH.—For the purpose of determining the degree of sensibility in different parts, I placed the negative pole at the plantar surface of the feet, and pressed the positive to the skin at various points of the limb and back during the passage of a strong current, so strong that I could hardly bear it, and found no sensibility in the feet; but passing up the limb and body, sensibility increased, until, on reaching the eighth dorsal vertebra, when it became suddenly greatly increased, and in the hand and arms it seemed alarmingly great. The same results were obtained with immediate as with mediate electricity. From these observations, I concluded that it was the anterior column of the spinal cord that received the whole injury; but as some fasciculi from the posterior roots advance toward the anterior cornea, passing partly into the anterior commissure and partly in among the posterior group of motor ganglion cells, penetrating at times as far as the anterior portion of the lateral column, these were injured also, therefore motion was entirely lost, and sensitiveness was not abolished, but diminished.

Nov. 13TH.—The patient feels tolerably well; pain in one arm entirely disappeared; abdomen not so much bulged up; feels well after electrization, and is inspired with hope. Having seen the good effect of electricity upon her, I hoped that, through the electrization, the muscles might become more stimulated, arterial blood invited to the capillaries, and granulation encouraged; but, above all, that she might become enabled to lay longer on her side and relieve the wound from pressure.

Nov. 14TH.—Electrified her; removed some parts of dead tissue. The patient moves feet and legs a little more, right foot more than the left; pain subsided in the other arm, also, and she feels tolerably well.

Nov. 15TH.—Had her resting on her left side three hours, the longest time in her whole sickness. Separation of dead tissue from surrounding living ones had so far advanced as to enable me to cut them off without danger of producing septicæmia. It was a horrible sight to behold the extent and depth of mortification. I removed pieces of about one and one-half inch in thickness from the sides of the sacrum. Os coccygis and lower part

of posterior wall of rectum, to within one-third or one-half inch from the margin of the anus, is laid bare. I must remark here that, partly through relaxation, but more so through the loss of connection of the soft parts among themselves as to the bones, the distance between the apex of the coccyx and margin of the the anus had increased more than double, and there was danger of perforation of the rectum.

NOV. 16TH.—The patient feels very badly, and general debility is so great that she can hardly lie on her side long enough to have the sore dressed. Electricity was discontinued because all hope of her recovery had vanished. Removed more necrosed patches, in the center of which could be discerned muscular tissue surrounded by aponeurotic membrane which longer withstood the process of decomposition. She had a severe chill the night before, followed by a little elevation of temperature and sweating; complains of difficulty in breathing when lying on her side, especially the left.

NOV. 17TH-18TH.—Her general condition is better, and she slept well last night. The poultices were discontinued; she can not remain longer on her side than is necessary to clean and dress the wound. The whole posterior portion of the sacrum is laid bare.

NOV. 19TH.—Patient is very low; had fever all night; hypostatic pneumonia is present; I drew off the urine and dressed the wound, which looks horridly and smells very badly; those parts which yesterday, after separation of some dead tissue, looked fresh and red though anæmic, now look black; continued pressure kills one part after another. She is fighting death step by step.

I must not omit to mention here, that she never experienced any pain in that horrible wound over the sacrum and coccyx, nor any sensitiveness during my dressing it; but in a small insignificant bed sore about the lower third of the vertebral border of the right scapula she complained of pain.

DEC. 4TH, 6:30 P. M.—The struggle is over. From the 19th of November until to-day she was dying slowly but surely, though she felt now and then a little better.

DEC. 5TH, 11 A. M.—The post mortem examination was made by Dr. Mudd and myself, and revealed the following: The spinal cord in the cervical and as far as the upper dorsal vertebra, looked sound, but the spinal canal in the lower dorsal and lumbar region was filled with putrid matter. The nerves forming the cauda equina seemed intact during our examination of the vertebral column; while standing at the cadaver, we could not discover any abnormal condition of the vertebra, but a closer examination of the five lower cervical vertebra, which we took home with us for that purpose, disclosed the following: The left superior articular process of the fifth cervical had a small portion broken from its apex. The articulation was reddened and rough-

ened, but the surfaces were in proper relation. The left superior articular process of the first dorsal was broken off at its base; the left inferior articular process of the seventh cervical vertebra was denuded at its apex, as if the broken surface of the base of the left superior articular process of the first dorsal had rested against it, as it would have done in case of dislocation forward of the seventh cervical vertebra upon the first dorsal. The right superior articular process of the first dorsal rested behind its proper site, a fourth of an inch on the broken right lower articular process of the seventh cervical vertebra, which, with a portion of the lamina of the same, had been broken and displaced backwards. There can not be any doubt, that we would have found a fracture, probably united, in one of the five lower dorsal vertebrae, had we taken them home also for a closer examination.

DR. HUGHES then resumed the subject of yellow fever, saying: What Dr. Johnston says upon the subject of germs is not germane to the subject. I have expressed myself upon the nature of yellow fever, years ago, before this Society. I do not deem it necessary to reiterate my views, as it is not material whether yellow fever consists in a germ, or in malaria, or in any zymotic poison, since we know as a matter of fact from our observation of the process of nature that a certain degree of cold is antagonistic to the vitality of yellow fever, whatever may be its real materies morbi. With regard to the observations of Dr. Moore, I have simply to say, that whilst it is necessary in the extermination of yellow fever generally, that the cold should reach about zero, so low a temperature is not necessary in order to disinfect individuals. It is not necessary that persons should be subjected to a temperature even so low as that; yellow fever, seldom, if ever, flourishes in a temperature below 70° , and, if I am not mistaken, it seldom makes its appearance before the temperature reaches 75° or 80° . I am not sure that any advances have been made upon the observations of that old writer, Dr. Benj. Rush, of Philadelphia, respecting the nature of yellow fever. It has been very plausibly asserted that the germ of yellow fever, and the so-called malaria, which is the cause of remittent, intermittent and bilious remittent fevers, are the same. I took occasion to say some years ago before this Society, that I regarded yellow fever as the product of a specific poison engrafted upon a typho-malarial poison of the system. I drew those conclusions from the fact that yellow fever is found in malarious districts, that it prevails in this country preferably, and I believe has invariably prevailed in localities where typhoid-malarial diseases have flourished before it. It prevailed in Philadelphia from 1793 to 1804. I believe that the conditions of its existence then were the same as now, that it was a specific poison engrafted upon a typho-malarial condition of the system. The question as to its importation from the West Indies, was then raised as now, but Dr. Rush did not believe it came from there.

DR. FORD:—Our notions with regard to the importability of yellow fever, the duration of its epidemics, and the endemicity of the disease, are largely controlled by the hypothetical views we entertain as to the nature of the *materies morbi* by means of which, when once begotten, yellow fever indisputably becomes communicable from the sick to those who are not yet sick. There are two hypotheses on this subject, viz.: the germinal and the fermentative. I have expressed myself in this society several times during the last few years as wholly unwilling to accept the popular germinal doctrines of disease. I believe they are fallacious in every point of view, and but a temporary refuge for opinion to those who fail to consider the varying conditions of the human body as a reflex of the varying conditions of the external world whose phenomena indeed control the movements of the system to a very great extent. The fermentative doctrines of fever, in particular, essentially based upon Liebig's views on this subject, I am compelled to accept, and all our late advances in pyretology, and the transmissibility of fever, forces us to believe that different types and forms of fever are merely different modes of response on the part of the system to appropriate zymogenous contagia, differing more or less among themselves, and therefore indicative of different though essentially similar symptoms on the maladies they induce. These differences in the yeast-like matters which precipitate fever will be acknowledged in visible differences in the symptoms and characters of the fevers induced or precipitated by these particles. The elements of which our bodies are composed, in common with all other living creatures, are so nicely balanced that almost inappreciable forces are competent to disturb them, and to pre-determine the route by which the complex forms of matter of which our tissues are composed shall be resolved into simpler ones, in accordance with an ever-acting law of animal existence. This is normally and abnormally effected by ferments of various kinds. In disease the ferment produces its like, and is capable of originating a similar train of action in a second animal body by what we call contagion. Nature furnishes us with almost unlimited varieties of the chemical sequences through which a given structure is resolved into crystalloidal matters, so that the variety of ferments, and of fermentative processes, must be held to be, perhaps, unlimited.

I have neither time nor inclination, at present, to consider the fallacies, inadequacies, dangers, and miserable poverty of the ideas controlled by the popular germinal doctrines. One day, in appointed time, this empirical hypothesis will die out. I have formed my own views after an extensive survey of the field of facts, and while constantly determined to yield to what I saw to be the truth. The opinions I entertain, therefore, with regard to the *materies morbi* of contagious fevers are based entirely on facts, and dependent upon no theory. I have maintained, since

1854, that yellow fever is caused by high heat in conjunction with high humidity, as predisposing causes, while the effective cause is the absorption of the gaseous products of putrefaction in cities or in the country, associated, of course, with the effluvia from putrefying matters of animal origin. When once induced in an individual, the febrile motion, what we call yellow fever, is contagious; that is, the products of the diseased body are capable of inducing a similar mode of action in another human body which has been subjected to high heat and humidity. In this connection, Billroth speaks of dry, dust-like particles derived from the sick as the materies of contagion in pyæmic and septicæmic fevers. I believe that this is also the case in yellow fever. I believe that the contagious element of yellow fever is of the nature of those dry, dust-like particles, not at all self-existent matters, but simply moist or dried animal fluids, capable of setting in motion the peculiar processes which are characteristic of yellow fever. In other words, the special train of symptoms known as yellow fever. These particles, pulverized black vomit, spittle, sweat, and nitrogenous matter exhaled from the lungs, the moist effluvia from the urine or fæces, are all stamped with the special ferment power of the body whence they have been derived, and capable of inaugurating or at least determining a similar process in a properly receptive organism. All these derivatives from the sick are of the nature of a special ferment, and will impart their special fermentative stamp upon any febrile movement whatsoever, thus causing other fevers to assume the livery of yellow fever. There is no attribute of life about the contagious matter of yellow fever; were this the case, a frost would destroy it. The facts show that this contagion is perfectly effective, even after several heavy frosts. It is not a living germ which can be killed by cold, but is essentially dead matter, merely minute portions of an organism impressed with distinct necrotic processes; it is a characteristic septicæmic yeast. There are numerous instances on record where this material of contagion has been preserved from one summer to another, although, like yeast or vaccine, its properties usually disappear after a certain time, for all ferment actions, it must be recollected, are progressive, and eventually change their type, that is, pass into some more advanced mode of fermentation, and so lose their special original power. Cold alone, therefore, can not annul the power of the yellow fever contagion, but effectually preserves it, while moderate heat and moisture undoubtedly tends to destroy it, as these agencies similarly impair and eventually annul the properties of the vaccine virus. Numberless cases of death by yellow fever have occurred the past year in persons who had returned to the stricken localities after several frosts, and a great and continued declension of the mean temperature. Only a few days ago I heard of the death of a friend of mine who had returned to a Southern city after the first of

December, six weeks after the first frost. Up to the time of his return, he had been living as a refugee from the fever, in a malarial locality, and this, together with an immoderate use of alcoholic liquors, rendered him, in my opinion, unusually receptive to yellow fever. On his return, he took a room in a hotel which had been used as a hospital for yellow fever the past summer, and he died about December 20th. It is not by any destruction of germs or impairment of the yeast-like potency of the yellow fever contagium, wrought by cold. I maintain and believe that a yellow fever epidemic is arrested, for many cases occur in December and January, when there has been plainly no latency whatever. The influence of cold is two-fold: first, it diminishes and arrests putrefaction, and the evolution of miasms from filthy places; and, secondly, it lowers the receptivity of the population by an abatement of the heat, and especially of the humidity. Cold weather, moreover, is usually accompanied by an increased ozonicity of the air. Thus, when cold weather has fairly set in, the popular receptivity is quickly lost, so that, although the proper contagium be inhaled, it nevertheless fails to act. It is for a similar reason that, far north, where fevers do not habitually prevail, where we have cool and windy nights, imported cases of yellow fever invariably fail to propagate their kind.

DR. JOHNSTON:—Do the conditions necessary for the development of yellow fever always exist at the South?

DR. FORD:—I am satisfied that the disease is begotten wherever we find it; that wherever yellow fever manifests itself it *has been latent*; that wherever we see it it *may have prevailed* as an epidemic, had the meteorological and telluric conditions been sooner or more strongly pronounced. Yellow fever is always produced where it is observed, or it has been precipitated there prematurely by imported contagion. It can not exist where there is no animal filth, and where the humidity and heat are low, and miasms blown away by constant breezes. But once begotten, the disease may manifest itself long after frost, in *peculiarly receptive constitutions*, through the medium of contagion, effected by ingestion or inspiration of dust-like particles originally derived directly from the bodies of the sick.

DR. JOHNSTON:—Allow me to ask, again, whether the conditions necessary for the origination of yellow fever always exist at the South?

DR. FORD:—Some of the conditions exist at the South at all times, in every seaboard city, on the borders of streams, and in the vicinity of harbors. Several causes, however, must combine to produce yellow fever. These are, as I have already said, long-continued heat, great humidity concomitant with great barometrical pressure, and, of course, unusual fairness of the sky and calmness of the nights, which signifies stagnancy of the atmosphere. All these conditions favor over-heating of the body,

beget a tendency towards fever, and at the same time promote decomposition of collections of filth, and so cause an unusual evolution of miasmatic effluvia.

DR. JAS. M. SCOTT:—Why, then, do we not have the fever every year?

DR. FORD:—I believe that the southern gulf and seaboard cities, and the cities of the Mississippi Valley, will forever stand in danger of yellow fever. It has been asserted that the disease is always present in New Orleans, but this is not strictly true. Though constantly *impending*, yellow fever does not make its appearance every summer in the localities referred to. This is simply because the full complement of meteorological conditions is not present in such healthy years. I know this positively, from my own researches, although similar views have been entertained by many, and have been strongly urged by the enlightened Barton and others. In seasons, at the South, when yellow fever does not prevail, the days, and especially the nights, are windy, and the drought excessive, or the rain almost constant—one or the other—so that, although the putrefactions are always at hand, putrefiable matters are either bodily washed away by the floods of rain, or the putrescent surfaces are dried up by almost absolute drought, or else gaseous effluvia from such surfaces are blown away by the wind. The healthfulness of cities at the South, with regard to yellow fever, is more dependent upon the windiness of the nights than upon any other meteorological condition. Calmness and stagnancy of the air at night will surely beget the disease if high heat and high humidity concur.

DR. HUGHES:—What became of those yellow fever germs that were washed out of the sewers and into the harbor of Philadelphia during the winter of 1800 and previous?

DR. FORD:—I have always regarded the disappearance of yellow fever from Philadelphia as attributable to the admirable methods of drainage and paving, and free use of water adopted by that city. The surface of the city is kept clean, for an impermeable pavement prevents the impaction of the droppings of animals, both in the streets and most of the court yards and alleys. All of the best of this work has been done since the last visitation of yellow fever. Still, if yellow fever were taken to Philadelphia, during the summer season, it might even now spread in seasons of exceptionally unfavorable meteorological character.

Trommer Extract of Malt Co.

FREMONT, OHIO.

FREMONT, Ohio, April, 1878.

DEAR SIR:—

It is now five years since we first introduced and began the manufacture of Extract of Malt in the United States. It has been our aim to furnish the medical profession in America with a malt-extract equal to the best German make, and (by saving the expenses of importation), much cheaper than the foreign article can be afforded. For the manner in which our efforts have been appreciated by the medical profession, we desire to express our warmest thanks.

The difficulties attending the manufacture of Extract of Malt in large quantities, can be overcome only by that kind of skill which is acquired by experience. Its constituents must receive no injury by the process, and good flavor and keeping quality, adapting it to all climates, must characterize the product. All are familiar with the striking difference between certain celebrated brands of ale and porter—and yet the poorest as well as the best, is, or should be, produced from barley malt and hops. Success greatly depends, of course, upon the employment of none but the best material; but it is by the use of specific and long-tried procedures that results are obtained which are so difficult to rival.

We do ourselves but simple justice, in stating that our *entire attention* is, and for many years has been, *exclusively* devoted to the manufacture of Extract of Malt for medicinal purposes, and that we give our undivided personal attention to each step in the delicate process by which Extract of Malt of excellent quality can alone be made.

Under these circumstances, it is unreasonable to suppose that the various manufacturers of fluid extracts, elixirs, pills, etc., (who attracted by the high reputation of our Extract of Malt), have recently in various sections of the country, undertaken the manufacture of a similar article, should generally succeed in producing it of a quality according to the fulsome praise with which their advertisements are filled. While being perfectly willing to let the reputation of our Extract of Malt rest upon its real merits, we owe it to the medical profession, as well as to ourselves, to give warning against imposition.

It has come to our knowledge that certain articles extensively advertised as “pure” and “genuine extract of malt,” are composed chiefly of the substance called GRAPE SUGAR or MALTINE, which, as is well-known, is the product of the action of sulphuric acid upon starch subjected to a high temperature. This artificial grape sugar or glucose, which is extensively manufactured from corn starch, is now being used in immense quantities, instead of ordinary cane sugar, in the sophistication of confectionary sugar house syrup, “strained honey” native wines, and canned fruits, and by some brewers in the manufacture of beer and ale. The cheapness of this artificial product of Indian corn, constitutes the chief inducement for this species of substitution for barley malt and sugar cane.

Again, an extract of malted grain is manufactured for the purpose of obtaining *diastase*, which, (simple and variously combined) is much used in medicine. The appearance of the extract is but slightly changed by being deprived of this important constituent, although, it is unnecessary to add, that its value as a medicinal agent is thereby greatly impaired. Nevertheless, this very substance, which is little more than refuse material, in the manufacture of *diastase*, is now being offered for pure malt extract.

It is *malt extract* prepared from barley malt combined with the proper proportion of hops, that has been for many years the standard medicinal nutritive employed by the medical faculty of Europe, and especially of Germany. Its value has been established by experience, and its use in the treatment of almost all forms of disease of nutrition is constantly extending. We shall continue to devote the most scrupulous attention to the maintenance of the reputation of our malt extract, by the careful selection of material and by unwearied personal attention to manufacturing details.

Attention is respectfully directed to the accompanying extract from Ziemssen, and also to our circular and testimonials elsewhere printed.

Very respectfully,

TROMMER EXTRACT OF MALT CO.

FROM ZIEMSEN'S CYCLOPEDIA OF THE PRACTICE OF MEDICINE, VOL. XVI, PAGE 474:

“The Malt Extract prepared from Trommer's receipt is designed to fulfill much the same purpose as cod-liver oil, carbo-hydrates (malt sugar, dextrine), taking the place of fatty matter. The simple (much or little hopped) and the chalybeate form of Malt Extract are coming more and more into favor as substitutes for the oil; they are more palatable and more easily digested, and should, therefore, be preferred in the dyspeptic forms of anæmia. During the last few years Malt Extract has almost entirely taken the place of cod liver oil in the treatment of phthisis, and other wasting diseases at the Basle Hospital, and we have as yet found no reason for returning to the use of the latter remedy. The Extract may be given from one to three times a day in doses varying from a teaspoonful to a tablespoonful in milk, broth, beer or wine.”

Saccharated Chloro-Pepsine

The Best Remedy for Nausea and Vomiting in all forms,
ESPECIALLY OF PREGNANCY, INDIGESTION & DYSPEPSIA,
ALL FORMS OF GASTRIC DERANGEMENT, ATONIC
DIARRHŒA, INDIGESTION—DIARRHŒA
OF CHILDREN, Etc., Etc.

Vomiting in General is a reflex act due to an irritation either within the stomach—whether the irritant be introduced as such, or the irritation proceeds from over-distension of the organ or fermentation, decomposition of food—or without the stomach, the sympathetic variety.

Vomiting of Pregnancy is an example of the latter part.

A supply of *pure pepsine*, or any or all the gastro-intestinal digestive principles, fails to remedy the trouble. Why? Simply because this *functional derangement* of the **GASTRIC SYMPATHETIC SET OF NERVES** requires that the remedial agent shall be especially addressed to this portion of the nervous system.

Realizing this fact, I have prepared a compound **SACCHARATED CHLORO-PEPSINE**, in strict harmony with the pathological indications to be met, as may be attested by a perusal of the formula given below.

The Indigestions.—Indigestion, when due to deficiencies of gastric secretion, atony, or hyperesthesia, always demands an artificial aid to digestion, in addition to regulation of diet. Pure saccharated pepsine has been used until lately; now, however, it is further reduced in strength by the partial substitution of pancreatine, the intended action of which is prevented, *since pancreatine itself*, as the physiology of digestion plainly teaches, *is decomposed by gastric digestion*. My compound not only supplies the necessary amount of pepsine, but also the *Cerium*, which, acting as a sedative tonic, overcomes the hyperesthesia of the gastric nervous supply, and hydro-chloric acid (the normal acid of the gastric juice) is generated within the stomach by the liberation of chlorine from the lime (oxychloride).

Further, the *Saccharated Chloro-Pepsine* has a very powerful and instantaneous influence in stimulating the secretion of saliva, which flows in abundance the moment the compound is placed upon the tongue. The importance of this in relation to the digestion (partial) of the starchy elements in cases of weak digestion of this class of aliment should not be overlooked.

I believe my preparation is *greatly superior* to all other compounds in the market, and to simple saccharated pepsine. Only a short time before the profession, IT HAS GAINED GREAT POPULARITY.

Testimonials received from very eminent members of the Profession attest its superiority.

FORMULA.

Pepsine Porci	<i>gmm.</i> 140.005,
Cerit et Calcii Oxychloroxalat	77.758
Sacch. Lactis	ad 373.241
<i>m</i> Sig., for Adults	10 to 15 grains a dose.
for Children	1 to 10 grains a dose, according to age.

It is intended to restrict the sale of this preparation to physicians' prescriptions and orders, so that I shall rely on the profession to test its efficacy and and give it support.

PUT UP IN ONE OUNCE BOTTLES.....PRICE \$1.00.

PREPARED BY

BENJ. W. DYER, Manufacturing Chemist,

460 Fourth Avenue, corner 31st Street, New York City.

GENERAL AGENTS,

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was apt to sweat his patient too much, and in that case the influence of the mercury was not secured by introduction into the skin, but rather by inhalation, for most of the mercury was washed off the skin by that mode of administration.

THE PRINCIPLES AND PRACTICE OF MODERN LITHOTRITY AND THE
RECENT ISSUES BY WHICH THEY ARE IMPERILLED. By REUBEN
A. VANCE, M. D., of Gallipolis, Ohio.

When a calculus remains for any time in the human bladder, that bladder becomes diseased. This is true even in those cases in which the stone is due to a nephritic calculus formed in the kidney, and deposited in the bladder after a journey from the pelvis of the kidney to the vesical cavity. The irritation due to its presence causes congestion of the walls of the bladder; hyperæmia of these tissues produces an augmented secretion of vesical mucus; and the normally acid urine has its reaction changed by the presence of an excessive quantity of alkaline mucus. The series of changes thus inaugurated are familiar, I doubt not, to all my auditors. The urine decomposes, ammonia develops, and to the mechanical irritation due to the presence of stone, an equally potent cause of congestion is to be found in the chemical irritants which result from the changes induced in certain of the constituents of the urine. The surgeon knows that in addition to those measures necessary for the removal of the stone, others looking to the control of the inflammatory action which it has excited must be adopted. In many cases palliative measures are only admissible, for the changes induced in the vesical walls are too extensive to be entirely overcome. Thus, when congestion has been attended by the development in the bladder walls of those results of inflammatory action which become organized, not only are those structures thickened and altered, but the cavity of the bladder is diminished in size. On the other hand, when the course pursued by these pathological phenomena has been different, and prolonged retention of urine has been an element in the clinical history of the affection, atony, or even paralysis of the vesical walls, with dilation of the

bladder, is to be expected. The extension of the pathological phenomena along the ureters to the kidneys, or along the genital tract to the epididymis, explains the reason why the kidneys, and testicles are implicated in cases in which the stone has remained in the bladder for a length of time. Congestion of the prostate and hypertrophy of the muscular tissues of the bladder are powerful agencies in producing enlargement of the former organ, and the development of sacs in the walls of the latter. In addition to hypertrophy of the prostate and sacculation of the bladder, the extension of the inflammatory action from the cystitis due to vesical calculi, and consequent development of disease in the ureters, vasa efferentia, epididymis, testicles and kidneys, the constant irritation of the bladder by the stone may stimulate into active growth any latent tendency to carcinomatous degeneration. Tumors of the bladder, although rare, are nevertheless occasional complications of vesical calculi which are indirectly due to the presence of the latter.

From the foregoing facts we learn why the surgeon is compelled to admit two elements into the problem which the removal of a vesical calculus presents to him—the one the stone itself; the other the state of the bladder. A certain amount of preliminary treatment directed to improving the condition of the bladder is necessary, it matters not what measure is adopted for removing the stone. This is not so vitally important in lithotomy as in lithotrity, yet it is required in both operations. For the success of lithotrity the irritability of the bladder and urinary passages must be reduced to the minimum. This is one of the most important of the preliminary steps which the surgeon must take. Next, the general health of the patient must be improved to the maximum. This measure is likewise essential. In fact, in the case of a patient with stone in whom it would be reasonably safe—so far as the other bodily organs, aside from the bladder, are concerned—to perform any capital operation, no surgeon can properly decide against giving him the relief lithotrity affords, until both these measures have been adopted. It may be inquired why these steps should be taken. A moment's glance at the contra-indications of lithotrity will render apparent the answer. In general terms, stricture of the urethra, hypertrophy of the prostate, atony, or paralysis of the bladder, sacculation or carcinomatous degeneration of the vesical walls, villous tumor of the *bas fond*, and renal disease are the most se-

rious obstacles to lithotripsy. If we add to this list, multiple calculi, and calculi too large or too hard to be crushed, we embrace all the special contra-indications to this operation. Judicious measures can often increase the calibre of the urethra, reduce swelling of the prostate, and restore power to the contractile walls of the bladder.

In a paper presented to the Ohio Valley Medical Association in 1876, I summarized my views on these points in the following language: "If we revert to the essentials for lithotripsy it will be found that the crushing process is preferable in all cases where stone will yield to the lithotrite, provided it is desirable to operate at all, and the urinary passages are large enough to admit the instrument with ease, and not so delicate but what it can remain in the bladder for a few moments at a time, and consider each one in detail, we will find, I think, that all the contra-indications to lithotripsy can be arranged under one or the other of these different heads.

"Is it desirable to operate at all? To this question a negative answer must be returned in many, very many, cases. Patients who suffer from advanced Bright's disease, aneurism of one or other of the great vessels, organic disease of the heart, and the like, are manifestly not subjects for lithotripsy, or any other capital operation. A microscopical examination of the urine should be made sufficiently often to convince the operator not only that he is not dealing with a case of incurable kidney disease, but that the patient before him is free from organic degeneration of the bladder, for experience shows that villous disease of that organ may and not unfrequently does not co-exist with vesical calculus.

"The size of the urethra and the degree of irritability of the urinary passages are very important elements in the question of lithotripsy or lithotomy. The smaller size and greater degree of irritability of the genito-urinary passages of a child renders the crushing operation less applicable than a resort to the knife. With advancing years this necessity for the employment of the knife grows less and less, until in many cases in which the patients are still under puberty, the choice between the two operations will depend either solely, or to a very great extent, upon the ability of the surgeon to overcome vesical and urethral irritability to such a degree that the lithotrite can be tolerated in the bladder for a number of minutes in succession. It is suffi-

cient at present to say that a judicious surgeon can overcome this hyperæsthetic state of the urinary mucous membrane in all cases where the passages are of a size to allow the entrance of a lithotrite, and it thus becomes evident that in the hands of such an operator, the number of cases in which it will be possible to substitute the crushing for the cutting process will be much greater than in the hands of one who blindly follows the rule, rather than strives to overcome contra-indications. The amount of obstruction afforded by a stricture of the urethra, or an enlarged prostate gland, whether occurring alone or complicated by urinary fistulæ and chronic cystitis, can only be estimated in each individual case. Enlargement of the prostate can militate against crushing in those cases only in which the obstruction is great enough to interfere with the proper manipulation of the lithotrite. The chronic cystitis accompanying both stricture and prostatic hypertrophy, especially when attended by atony of the vesical walls, cannot be viewed as an evil in every sense of the word, for the fact that this condition of the walls of the bladder is accompanied by great tolerance on the part of the mucous membrane lining that organ—a degree of tolerance which makes that structure indisposed to take an inflammatory action when subjected to the irritation arising from the presence of the fragments of stone—prevents our including inflammation of the bladder among the conditions absolutely contra-indicating lithotripsy.

“In cases where the general bodily health is such as to admit of an operation, and the state of the urinary organs favor lithotripsy, a crushing operation may be rendered impracticable by the size and the composition of the calculus. Thus, when the stone is of oxalate of lime, and exceeds an inch in diameter, it may be mechanically impossible to crush it by any force that can be brought to bear upon it by the lithotrite. In a very large uric acid stone, or a stone composed in great part of phosphatic salts, although within the power of an instrument to crush, yet the number of sittings necessary, and the length of time during which the fragments would necessarily be in immediate contact with the lining membrane of the bladder, are circumstances which often induce the surgeon to resort to the knife rather than to the lithotrite.”

To recapitulate in a few words: Vesical calculus occurs in men and women, in the adult and in the infant, at one time com-

plicating fatal disease, at another constituting the sole complaint under which the patient labors; and while the measures adopted for the relief of the patient must vary with the special circumstances of the individual case, yet no one should be subjected to lithotomy unless lithotrity is contra-indicated by one or other of the above-named reasons. Good surgery and the dictates of humanity pronounce in favor of the painless and safe procedure by which the stone is crushed, and reserve for peculiar and exceptional cases the less tedious and more brilliant operation in which the bladder is cut open and the stone removed at a single sitting, as in lithotomy.

The *London Lancet*, of March 16th, 1878, contains an account of the discussion at the Medico-Chirurgical Society, of that city, which followed the reading of Sir Henry Thompson's paper presenting an "Analysis of Five Hundred Cases of Stone in the Male Adult." Sir James Paget stated that were he to recommence an active surgical practice he would begin with lithotomy, and reserve for lithotrity only those few cases in which the calculus could be got rid of in two or three sittings. Sir James further announced that he regarded lithotrity as hardly susceptible of additional improvement, and yet its results were often incomplete and unsatisfactory. Even Sir Henry Thompson seemed to sympathize with this feeling, and stated that in his last hundred cases he had been drawing the line more closely, and reverting to lithotomy in a larger proportion of cases. With such statements to guide him, it is not surprising that Dr. Van Buren concludes that "the general tone of the discussion was not very favorable to lithotrity," especially when Sir Henry Thompson, in his final summing up, plead for an extension of the line so as to include cases "where the stone might be crushed at three, or, at most, four sittings," beyond which point "he should most prefer to cut."

No new objections to the operation are urged as grounds for these views. On the contrary, the strongest points made against lithotrity were on account of the cystitis "due to the injury done to the mucous membrane by sharp fragments of stone and by continued instrumentation," the atony liable to be developed by it in old people, with a continuation of vesical irritability and phosphatic deposits, and the liability to overlook minute fragments and the consequent unsatisfactory results.

With this necessarily brief and imperfect outline of the prin-

ciples upon which is based the modern practice of lithotrity considered in connection with the utterances and conclusions of eminent surgeons whose views have just been repeated, am I not right in announcing that the new issues thus raised are calculated to do injustice to and even imperil lithotrity, the great triumph of conservative surgery? Must the body of the profession, the world over, be bound by the conclusions to be derived from the practice of a few illustrious English surgeons? May not London specialists enjoy a practice which is not truly representative, and must the profession resign itself to the statement that lithotrity is only applicable to the comparatively limited class of cases in which the calculus can be crushed "at three, or, at most, four sittings?"

A few words as to the latter point: In the first place, notoriously bad cases—those occurring in wealthy men, who can command every agency which will mitigate their sufferings, and postpone to the last minute the necessity for an operation—constitute a certain proportion of the practice which, after traveling far and near, and consulting surgeon after surgeon, finds its way to the eminent metropolitan specialist. These patients are able to command the services of a Thompson or a Paget, of a Coulson or a Cadge, and their wishes have untold influence in determining the kind of operation employed. It is among such men that the calculus is permitted to grow until the suffering it causes becomes unbearable; then these patients naturally determine to be relieved by the least painful and least threatening of the two methods available for that purpose. Exclude such cases as these from among the patients with advanced bladder and kidney disease—in whom the stone is large, the urinary passages tender, and the system irritable and predisposed to febrile reaction whenever the genito-urinary organs are disturbed—upon whom eminent lithotritists have operated, and I venture to say that there would be a decided diminution in the death-rate of patients in whom numerous sittings would have been necessary had not the cases resulted fatally.

In the next place, extensive degeneration of the kidneys is far more common in England than in this country, and vastly more frequent on the Atlantic seaboard of this continent than in the Mississippi Valley. Thus even the local practice of London surgeons has an element which is adverse to the successful treat-

ment of just that class of patients with stone who require numerous sittings for their relief by the lithotrite.

Other factors, which I have not time to dwell upon now, enter into and complicate the problem, but the foregoing illustrations will show that the exceptions which can be taken to conclusions founded upon the analysis of a special class of cases, are such as cast doubt upon the weight and cogency of any argument based on such analysis.

A justly distinguished New York surgeon, Prof. Wm. H. Van Buren, of the Bellevue Hospital Medical College, takes occasion to refer to this "new departure" in the operative surgery of the bladder foreshadowed by a paper of Thompson and inaugurated by the discussion at the Medico-Chirurgical Society, and in an article which he contributed to the *Medical Record* of September 28th, 1878, grants the validity of the objections made to the operation, but doubts the necessity of recurring to lithotomy as the only remedy, and asks: "Can not lithotrity be rendered less imperfect?" To this question he answers that "there is reason to believe that a discovery has been made by an American surgeon which may take away from lithotrity its chiefest objection, and it may prove that, as an operation, it is susceptible of improvement." Dr. Van Buren thinks that the evidence adduced by Prof. Bigelow, of Harvard, goes far towards the demonstration of "a tolerance by the bladder of protracted manipulation which has not been hitherto recognized,"¹ and publishes the details of cases which go to sustain the truth of the principle announced by the Boston surgeon. I am disposed to accord great value to this plan of removing the calculus in certain cases, although in doubt, I must confess, as to the novelty of some of Dr. Bigelow's propositions. Nothing but the imperfection of the original apparatus prevented the first operation, performed in the presence of Chaussier and Percy, the representatives of the Royal Academy of Medicine, from being a case of "Lithotrity by a Single Operation." In that case the operation was continued at intervals for forty minutes; eleven days subsequently it was repeated; the third and last sitting was held at the end of an interval of ten days, and twenty days after the first operation the man was free from stone. Again, the Baron Henoteloap, on the 24th of March, 1829, operated on a patient 64 years of age, at the house

1. Bigelow, Lithotrity by a Single Operation, *Am. Jour. Med. Sciences*, January, 1878.

of Mr. White, a surgeon in London, and in fourteen minutes removed a stone fourteen lines in diameter. Nevertheless, Dr. Bigelow has done good service in calling attention to this property of the bladder, for it seems that the inculcation of the salutary rule never to keep any instrument in the bladder longer than the conventional limit of from three to five minutes has originated an idea that the bladder is exceptionally intolerant to instrumentation; and while I believe his method of operating will save some patients from the alternative of the knife, I doubt if it can do much for that class in which, according to the rule announced in this paper, lithotrity is the measure to which they are entitled to look for relief.

Dismissing Prof. Bigelow's plan as inapplicable to the vast majority of cases in which the stone should be crushed, let us review the steps calculated to render lithotrity a painless and successful operation:

1st. In the first place the capabilities of the operation must be made the subject of earnest study. To dwell on this point, as its importance merits, would be to inflict on you a voluminous disquisition.

2nd. Individual experience must be accumulated; this point, also, will be dismissed for the same reason. There is one important fact to be borne in mind in this connection, and that is, other things being equal, the death rate in lithotrity will diminish in direct proportion to the experience of the operator.

3rd. The preliminary treatment adopted materially modifies the fatality of the operation. Two of the most important indications the surgeon must meet have already been recited. They are: (a) To reduce the co-existing inflammation of the genito-urinary tract. (b) To improve to the utmost the patient's general health. A third measure of equal moment is: (c) To determine accurately the patient's temperature, and to discover and record any variations from the normal standard.

The lithotritist should have the temperature of his patient taken every six hours or oftener. It is not enough that the family be supplied with an axillary thermometer, and that the unskilled efforts of inexperienced persons be recorded for the surgeon's information. I consider this measure of vital importance, and in insisting that a proper instrument be procured, and its application confided to professional hands, I am consulting the surgeon's interest almost as much as that of the patient.

Let a registered thermometer be kept by the patient's bedside—preferably, one that possesses an index which records the elevation reached by the mercury—and, at regular intervals have the bulb passed into the patient's rectum, and kept there from five to ten minutes at a time. If the surgeon visits his patient but twice a day, yet by using a self-recording thermometer he can have the temperature taken with mathematical accuracy, four times in every twenty-four hours. Thus, let him take the temperature himself at his morning visit, and after rating height, return the index to its position so that at the next appointed hour, the patient can insert the thermometer without assistance. The latter need do nothing more than return the instrument to its case after removing it from the bowel—the index will remain at the point where the heat of the body has raised it until the surgeon's evening visit, when he can note its degree, return it to a point below the standard of health and take the patient's temperature for the evening. The latter recorded, the instrument once more arranged for use as at noon, is confided to safe hands in order that the temperature may be taken at midnight. It very frequently happens that these temperature observations reveal a daily elevation beyond the bounds of health—an exacerbation that diminishes, and may even disappear with the adoption of measures designed to prepare the patient for the operation. In no event should the stone be crushed while the temperature-curve deviates materially from a healthy standard.

4th. The remedial measures which aid in subduing cystitis prior to crushing the stone may likewise prove of incalculable value in preventing the re-development in the bladder of inflammatory action from the irritation caused by fragments of the calculus.

There is one drug which renders the lithotritist great and timely assistance—I refer to opium, preferably in the form of morphia, and administered hypodermically. By suspending the activity of the muscular walls, and diminishing the sensibility of the mucous lining of the bladder, this drug in a great degree prevents the injury that otherwise would inevitably follow the violent contraction of the vesical tissues upon the sharp, angular fragments which result from the action of the lithotrite. What lithotritist whose experience has been at all extensive has not seen the wonderful change which a chill marking the onset of cystitis has initiated in the patient who, but a few hours before,

was doing so well? The torturing pain in perineum and bladder; the nervous anxiety and constant restlessness, but above all, the sharp attacks of vesical spasms, recurring every moment or two in which blood and pus mingled with urine are forcibly expelled from the urethra, mark the imminence of the bladder's peril, and constitute a clinical picture not readily forgotten. The surgeon is seldom placed in a situation demanding greater promptitude and skill; but rarely are his efforts so potent for good or for evil. The bladder must be quieted at all hazards. If a fragment has become impacted in the urethra, it must be removed, and, if despite all efforts the bladder cannot be brought under control, lithotomy must be performed, the fragments of stone removed and the patient thus given a chance for his life. But the latter alternative need rarely be embraced, thanks to the efficacy of remedial agents—especially morphia, administered hypodermically. The instant any evidence of cystitis develops, inject a large portion of morphia, the size of the dose being determined by the patient's susceptibility as learned by absolute test, during the preliminary treatment, and not by conventional rules, and in the vast majority of cases, the patient will be instantly relieved from pain, and the free perspiration then developed will mark the subsidence of all threatening symptoms.

5th. Finally, the lithotritist can rely with confidence on the indications afforded by the thermometer relative to many important details pertaining to the operation.

Armed with a knowledge of the patient's susceptibility to the action of opium, and possessed of the temperature observations which show how nearly the latter's heat-curve approximates that of health, the surgeon has data which not only enable him to recognize the first abnormal sign, but furnish him the means of counteracting or controlling it. The information thus obtained is a guide to the number, the duration and the frequency of the sittings. To the question: How are we to treat the cystitis which so frequently occurs after first crushing, and which is regarded by leading British lithotritists as "so serious a defect" in lithotripsy? I will answer by saying that by the adoption of the measures advocated in this paper, vesical inflammation can, in many cases, be prevented; in others, its severity will be mitigated; and in all instances its earliest approaches will be recognized, and its progress combatted with all the resources at the surgeon's command.

DISCUSSION.

DR. PRINCE:—I would like the attention of the Society for a few minutes to some general considerations of interest to all who may have to contemplate diseases of the prostate and bladder. The paper just read is of great interest, and I have but a few suggestions of my own to add. First I will remark upon the analogy between the prostate and the uterus as suggestive of the mode of treatment, for, as the uterus was capable of being expanded, so also the prostate would be found capable of dilatation to a small extent. This consideration might be made use of in the operation for stone. The incision (in the median line) having been carried into the anterior portion of the prostate, the finger is pushed into the bladder by the side of the staff, which serves as a guide, after which forceps are introduced along the staff. Further expansion is effected by the withdrawal of the forceps having the stone between the blades, as the neck of the uterus is expanded by forceps attached to the head of a fetus. The resisting fibers which are not torn should be enlarged by the introduction of a probe-pointed bistoury with its flat surface toward the forceps, by which the resisting fibers only are divided. The vessels and the connective tissue yield before the knife and escape division. The division of restricting fibers is made under tension, and the smallest extent of incision is secured compatible with the delivery of the stone. Whatever laceration takes place in this proceeding affords a wound less liable to absorption than one which is made by incision. The prostate contracts after the delivery of the stone, and the bleeding is small.

Still keeping in view the analogy of the prostate with the uterus, and the well known nature of mucous membrane after the removal of the stone, it must be expected that the mucous membrane of the bladder, which has been irritated for months, and perhaps for years, and which has become very sensitive to mechanical impressions, there must be a surface liable to absorption of putrid material; wherefore it would seem proper to apply to the interior of the bladder undiluted carbolic acid, or perhaps nitrate of silver, one or the other, dependent upon the choice of the surgeon. Then, again, the wound itself is one which it would

not be desirable to have healed by first intention, lest a pocket should be made for the deposit of matter to be absorbed into the system. The same course of reasoning, therefore, would lead to the application of carbolic acid to the wound itself. The anæsthesia following the application of carbolic acid to the mucous membrane and to the wound favors exemption from the pain usually following lithotomy at the same time that the absorption of effused fluid is prevented. The carbolic crust (or that occasioned by nitrate of silver) exfoliates in a short time, leaving a granulating surface of a healthy character. These hints are thrown out as supplementary to the paper.

DR. REBER:—I should like to know whether any gentleman has had any experience with quinine or cinchonidia with a view to preventing shock in the operation of lithotrity.

DR. OWEN:—I would like to hear from Dr. Gregory on this subject.

DR. GREGORY:—I am afraid I have nothing to say that will add to the interest of the subject under discussion, as my observations with respect to lithotrity are very limited indeed. I began by performing what is called the “brilliant operation of lithotomy.” My experience with lithotomy has been perfectly satisfactory, which, perhaps is one of the best reasons for my continuing to practice it. I have performed it perhaps over fifty times, and I believe it is one of the most successful surgical operations I have ever performed. To be sure, a large proportion of the patients operated on in the Valley of the Mississippi are young persons, but I have been very fairly successful, so much so that I now feel that when the responsibility of the operation falls upon me, I will be successful. I calculate upon success and should be very much disappointed if overtaken by failure.

As oratory and poetry are gifts, so am I inclined to believe that there is a natural gift in the manipulation of instruments. For some men have peculiar muscular sensibilities which enable them to manipulate instruments with skill, which others less gifted, however ambitious, could scarce attain. Perhaps my own diffidence in this respect is a reason why I have never been a lithotritist; I have never had that confidence in my own skill which I believe distinguishes many members of the profession.

I am satisfied that with the vast majority of surgeons lithot-

omy is a more successful operation than lithotrity, and I am also satisfied that if the practice of lithotrity were more general, the result of the comparison would be worse than it is now for lithotrity; but fortunately lithotomy is the more general practice.

DR. OWEN:—I thank Dr. Gregory for his remarks; they express my own sense of the comparison between the two operations. Lithotomy being a very simple operation indeed, and apt to prove successful even in unskillful hands, while lithotrity is very dangerous unless in the hands of the skillful. If I myself had to be operated on for stone, I would choose lithotomy, because in every case there would be a certain amount of cystitis, which in lithotrity would be on the increase, while in lithotomy not only would the irritating body be removed, but free drainage would be afforded, instead of leaving in the bladder sharp-edged foreign bodies with a constant tendency to keep up cystitis.

DR. GREGORY:—In answer to the question put by Dr. Reber, I would say that I have been in the habit in surgical operations of giving quinine a day or two beforehand and I believe it is especially useful in troubles about the bladder and the urethra. I have seen several deaths from urethral fever, and from that have got into the habit of using quinine.

DR. HODGEN:—I am in the same condition as Dr. Gregory, feeling that I have not special skill in lithotrity. With that special tact on the part of the operator to be gained only by practice, a stone may be crushed in the bladder with little injury to that organ, and I doubt not, if we have a healthy bladder, a small, soft stone, a large urethra, and a non-reactive nervous system, and a skillful operator, lithotrity is a better operation than lithotomy. But, in cases of an inflamed and irritable bladder, a hard or large stone, a narrow urethra, certainly lithotomy is greatly to be preferred. In this country surgeons rarely cut in a case of stone in which there is not cystitis, and in a large percentage of cases, the patient is worn down by suffering and the nervous sensibility exalted; in such cases lithotrity can not be safely performed. From the absence of these conditions and the selection of healthy bladders and small, soft stones for lithotrity, statistics are made to present this operation in a fictitiously favorable light. I have been pleased with the remarks

of Dr. Owen in regard to the comparative advantage of lithotomy in regard to drainage. Surgeons have long known that rest is the best antiflogistic. Every inflamed part should have rest, and I am sure the best method of relieving an inflamed bladder is to give it rest, and this can be secured only by making a free opening to allow the free discharge of urine which passes into the bladder. And further, the very best application to an inflamed bladder is healthy urine; better than carbolic acid. I am pleased that Dr. Prince has called attention to the so-called dilatation of the prostate in lithotomy. I am aware that the elastic ring at the neck of the bladder (that elastic ring which prevents the discharge of the contents of the bladder in cases of paraplegia) can be stretched, and I have, during the past fifteen years, given especial attention to the condition of this ring after lithotomy, and in many cases I have found this ring intact after removing stones of considerable size. In these cases, if the finger is passed into the bladder and carried around the outlet, the ring will be found continuous, is without a gap in it; but if the track leading to that ring through the prostate be examined, the gap in this organ will be found distinct.

The tissue of the prostate is not unlike that of the uterus, that is, made up of muscular tissue and follicular glands; these last are placed about the urethra in radiating lines, and bound together by delicate connective tissue derived from the dense fibrous capsule, and while to the touch it seems firm and resisting, it is very friable, and cannot be stretched, but is easily torn. The muscular tissue is continuous with the circular fiber of the urethra and bladder.

Some years ago a surgeon of St. Louis became a devotee to the business of stretching the prostate, and made a number of experiments on the dead subjects. He stated that the gland could be stretched so as to allow the passage of the patella from the same body. I saw some of these prostates, and looking from the inner surface of the bladder there appeared no tear, but so soon as the urethra was opened so as to expose that surface of the prostate it was found torn from apex to base.

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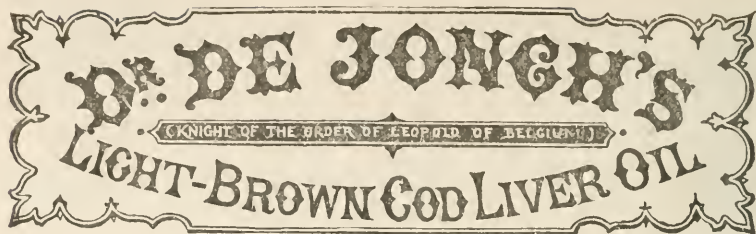
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Index to Advertisements

	PAGE.
Alce & Hernstein, <i>Surgical Instruments and Physicians' Supplies</i>	1
Appleton, D. & Co., <i>Medical Text-Books</i>	40
Burrington, H. H., <i>Wadsworth's Uterine Elevator</i>	33
Bellevue Hospital Medical College.....	29
Bedford Alum and Iron Springs Water and Mass.....	26
Billings, Clapp & Co., <i>Phosphorole</i>	18
Cincinnati Sanitarium.....	33
Caswell, Hazard & Co., <i>Beef Tonic</i>	17
Catlin, T. & E., <i>Retail Druggists</i>	25
Dyer, Benj. W., <i>Saccharated Chloro-Pepsine</i>	22
Fougera, E.....	2, 3, 4, 7, 24, 27 & 36
<i>Glycerite of Animal Hypophosphites</i>	9
Garratt & Co., <i>Constant Electric Disks</i>	25
Higgins, R. M., <i>Animal Vaccine Virus</i>	26
Landrum & Litchfield, <i>Iron and Alum Mass</i>	30
London Manufacturing Co., <i>Essences of Meats</i>	Third Page Cover
Mackwitz, W., <i>Engraver</i>	5
New York Pharmacal Association, <i>Lactopeptine</i>	8
Parke, Davis & Co., <i>New Remedies</i>	Fourth Page Cover and Page 20
Patterson, R. J., <i>Asylum for Nervous Diseases</i>	5
Reed & Carnrick, <i>Maltine</i>	14 & 15
Scheffer, E., <i>Apothecary and Chemist</i>	5
St. Louis Type Foundry.....	39
Spackler & Co., <i>Surgical, Dental and Orthopædical Instruments</i>	5
Schleiffarth Charles, <i>Trusses, Supporters, Shoulder Braces, etc.</i>	31
Trommer Extract of Malt Co.....	19 & 21
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Knapp Nursing Bottle.

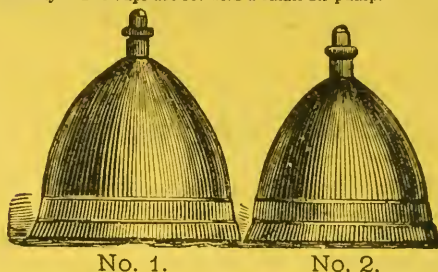
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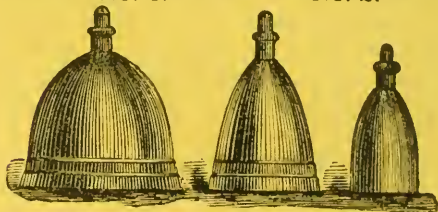
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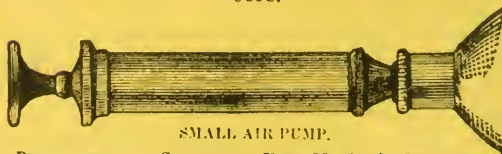
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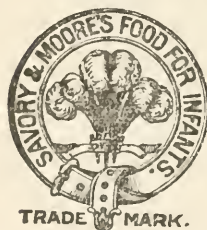
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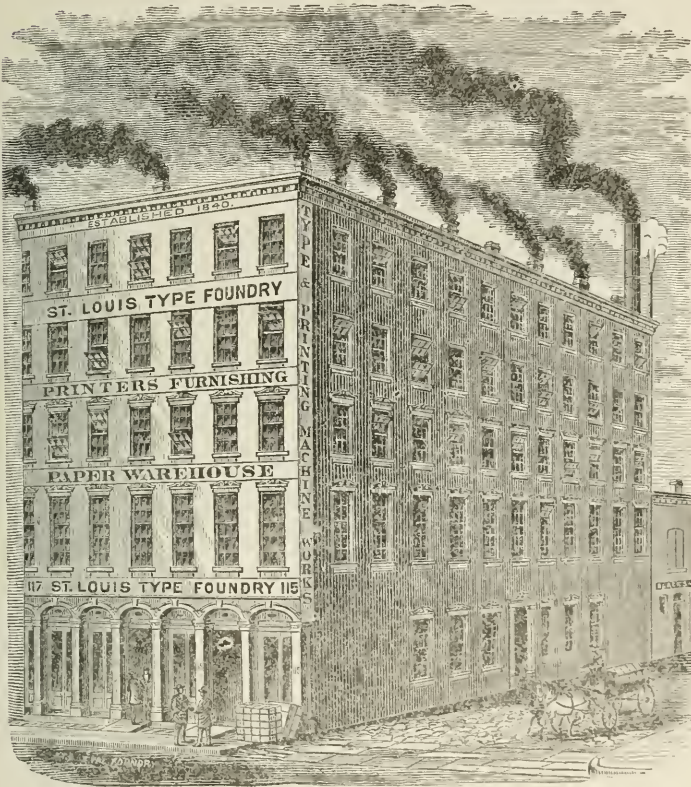
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